SD-P502-QD

PIONEER®
The future of sound and vision.

PROJECTION MONITOR RECEIVER

SD-P502/SD-P452

DOLBY SURROUND

NTSC

Operating Instructions

Congratulations on your purchase of the PIONEER Projection Monitor Receiver.
If you have not read the cautionary instructions on the front cover, please do so before proceeding.
After learning how to operate the Projection Monitor, be sure to keep this manual handy for future reference.

These operating instructions are for:
SD-P502; 50in screen size, AC 120V model.
SD-P452; 45in screen size, AC 120V model.
The illustrations and text in this manual refer basically to SD-P502.
Also, while the official name of the product is the "PROJECTION MONITOR RECEIVER," for the sake of brevity the text refers to it as the "Projection Monitor" or just the "Monitor."

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IMPORTANT NOTICE

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO WET LOCATIONS.

The Model number and the serial number of this Projection Monitor are located on the rear panel. Please write the serial number on the enclosed warranty card and keep it in a safe place for future reference.

NOTE:
There are no user serviceable parts inside the Projection Monitor.

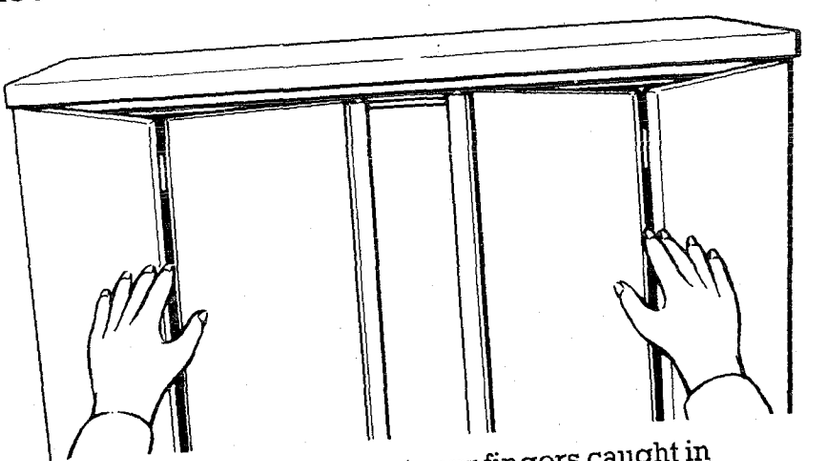
IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION ON PROJECTION MONITOR WITH DOOR



Be careful not to get your fingers caught in the door.

PRELIMINARY INSTRUCTIONS

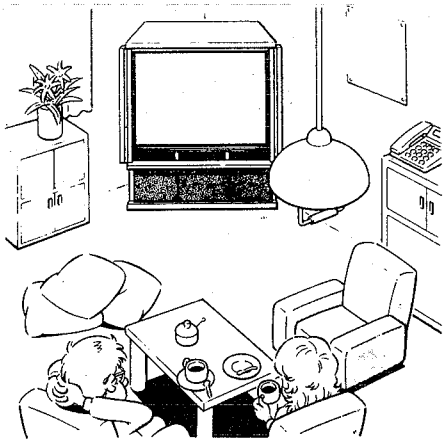
WHERE TO PUT THE MONITOR

LIGHTING
Bright lights or direct sunlight will dull the picture. Set the monitor so that the screen faces away from windows.

AIR CIRCULATION
Leave space for air to circulate in the back of the set. Keep away from curtains and other furnishings that could block ventilation.

HEAT DAMAGE
Damage may occur if you leave the set in direct sunlight or near a heater.

OPTIMUM VIEWING DISTANCE
10 to 23 feet is the range recommended for viewing comfort.



POWER SOURCE

This Projection Monitor runs on AC 120V, standard house current.

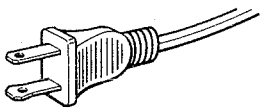
NEVER CONNECT THE PROJECTION MONITOR TO OTHER THAN THE SPECIFIED VOLTAGE, OR TO DIRECT CURRENT.

POWER OUTLET

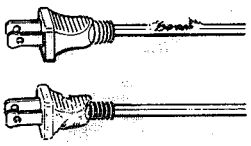
- This set requires an AC 120 volt polarized outlet. The plug will only fit one way. If it will not go in, turn it around and try the other way. If you still are unable to insert the plug, call an electrician to replace the wall socket.
- A damaged cord or plug is a fire hazard. If you notice wear or damage, have it fixed by qualified service personnel.
- Plug directly into the wall socket. Do not use extension cords or other receptacles. Do not overload the outlet; it may cause a fire hazard.

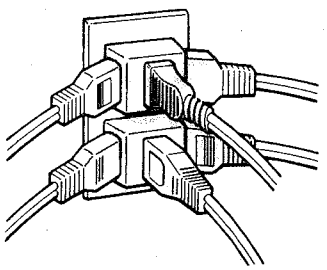
NOTE:
- *Never remove the back cover of the Projection Monitor as this will expose you to dangerously high voltage and other hazards. If the set does not operate properly, unplug it and refer to page 24.*

• POLARIZED PLUG



• DANGEROUS





FEATURES

Sharp, Clear Images with 700-line Horizontal Resolution. (SD-P452: 650-line)
- Sharp detail and crisp outlines, thanks to 10MHz video bandwidth and Dynamic Picture Control circuitry.
- New, high-resolution picture tubes improve focussing performance by 30%.
- Dynamic focussing circuit enhances resolution at picture edges.

Amazingly Bright Picture Intensity of 300 Foot-Lambert (SD-P452: 350 Foot-Lambert)
- New, highly-efficient lens system passes more light.
- High-power picture tubes employ advanced anode stabilization circuitry and 6000pF capacitors.

Much Greater Contrast with Extended Gradation
- True black reproduction under all conditions, thanks to Dynamic Black Level Correction Circuit.

Microcomputerized Dynamic Picture Optimizer (DPO) and AV Memory
- DPO (Dynamic Picture Optimizer) circuit detects room light and optimizes the TV picture accordingly.
- AV Memory lets you store and recall your picture and quality settings.

Equipped with Dolby Surround System—Movie Theater Ambience in Your Living Room
- This unit is equipped with a Dolby Surround decoder. This lets you enjoy theater-like surround sound in your living room.
- This surround system is designed for use with video programs (mostly movies on videotape) recorded with the Dolby Surround system. These usually have the DOLBY SURROUND mark on the videocassette label. This system gives an impression of left-right and front-back movement to match the action on screen.

- DOLBY SURROUND *manufactured under license from Dolby Laboratories Licensing Corporation.*
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INSTALLATION

ANTENNA CONNECTION

Connect to an outdoor antenna or a cable box or centralized antenna terminal. (See page 12 for details.)

MOUNTING

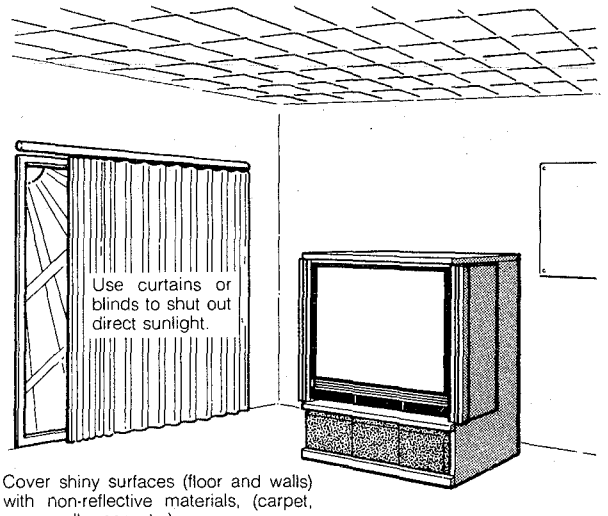
The Projection Monitor is designed to be placed on the floor or on a sturdy platform. The mounting surface should be flat and steady.

INSTALLATION PRECAUTIONS:

Place of Installation

- *When the Projection Monitor is operating, it is cooled by air-flow through ventilation holes in the rear and bottom. Therefore, avoid placing it in locations where the cooling air-flow is hindered (for example, against a wall).*
- *Avoid places subject to extremely high temperature or humidity, or to temperatures of 41°F (5°C) or lower. Also avoid dusty places.*
- *Do not set the Projection Monitor in an unstable position (such as on a shaky or a tilted platform).*
- *When setting the Projection Monitor on a floor of soft material, make sure that the floor material is not damaged by the weight of the Projection Monitor.*
- *If the room temperature suddenly rises (or if the Projection Monitor is moved from a cool place to a hot place), dew condensation may occur on the lenses, resulting in picture distortion or color fading. In such a case, simply wait a while (with the POWER SWITCH on) and the dew will disappear.*

Downward spot lights or fluorescent lights in an overhead "Honeycomb" prevent direct illumination of the screen.

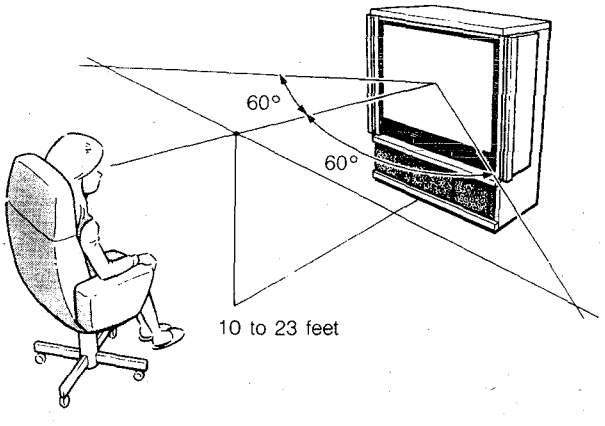


Cover shiny surfaces (floor and walls) with non-reflective materials, (carpet, rugs, wallpaper, etc.).

RECOMMENDED VIEWING AREA

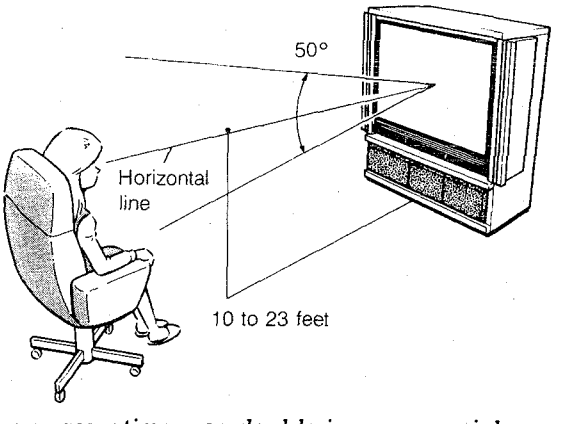
See page 20 for instructions on how to adjust the picture and sound.

HORIZONTAL BEST VIEWING ANGLE



VERTICAL BEST VIEWING ANGLE

Watch from at least three meters away from the screen. (Optimum viewing distance is four to six meters.)



You may sometimes see double images or rainbow-like effects if you view from outside of the recommended area shown here.

INSERTING BATTERIES IN THE REMOTE CONTROL UNIT

■ For details, see the separate operating instructions for the remote control unit.

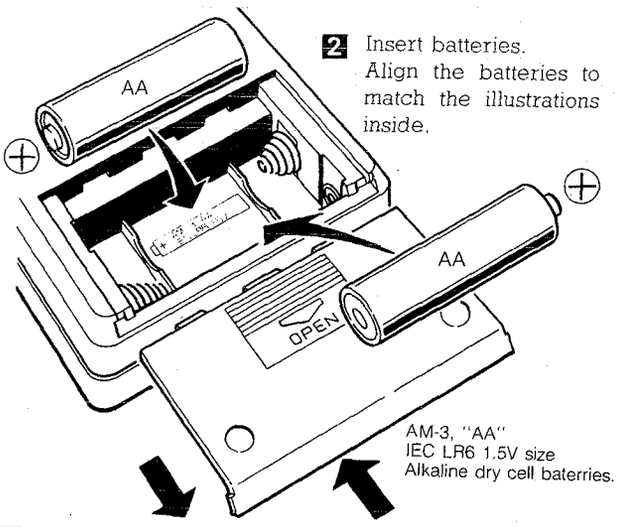
You will find the remote control unit packed inside the projection monitor box. Open the remote and insert the batteries. Follow the procedure below:

1. Open the battery compartment on the rear of the remote control unit. Press down with your thumb while sliding the lid outward.
2. Note the polarity (+ and −) markings in the case. Insert the supplied batteries so that they match the markings.
3. Close the lid by sliding it back in until it clicks into place and press reset button with pen point. The remote control unit is now ready to use.

NOTES:

- *Never use old and new batteries together. When replacing batteries, always replace the two old batteries with two new ones.*
- *Do not lay books or other objects on top of the remote control unit. The operation keys may be depressed, causing a continuous flow of battery power.*
- *See the remote control unit operating instructions for further detail.*

INSERTING BATTERIES



2 Insert batteries. Align the batteries to match the illustrations inside.

AM-3, "AA" IEC LR6 1.5V size Alkaline dry cell baterries.

1 Open by pressing with your thumb while sliding outward.

3 Close the lid by sliding back into place.

OPERATING PRECAUTIONS

Keep away from magnetic fields

The picture may be distorted if strong magnetic fields are nearby External speakers should be set at least two feet (50cm) away from the Projection Monitor. Electric fans and other motor driven appliances and toys may also be sources of magnetism.

When moving the monitor

Pull out the plug and move the set carefully. Be particularly careful not to bump or scratch the screen. To avoid damage to the casters you may need to lift the set when going over irregular surfaces.

Install in a flat, steady place

Do not put the Projection Monitor on a surface that is tilted, unsteady or prone to shake or vibrate. A shaky or slanted platform is dangerous.

Adjust room illumination

Excessively bright or dim lighting may strain your eyes. Draw the curtains if necessary to shut out direct sunlight.

When not using the set for a long time

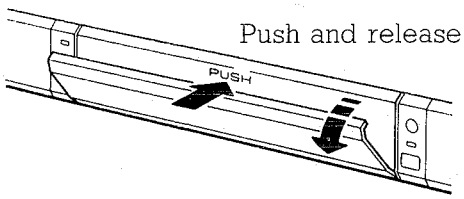
For safety, unplug the power cord when leaving the set turned off for long period of time.

Dew (condensation) and picture blurring

- You may see a blurred picture if the set is moved from a cool to a warm location or if room temperature rises very rapidly. This occurs when moisture from the air condenses on the optical parts.
- The picture will return to normal if you leave the set turned on for an hour or two.
- A gradual change in temperature can prevent dew formation.

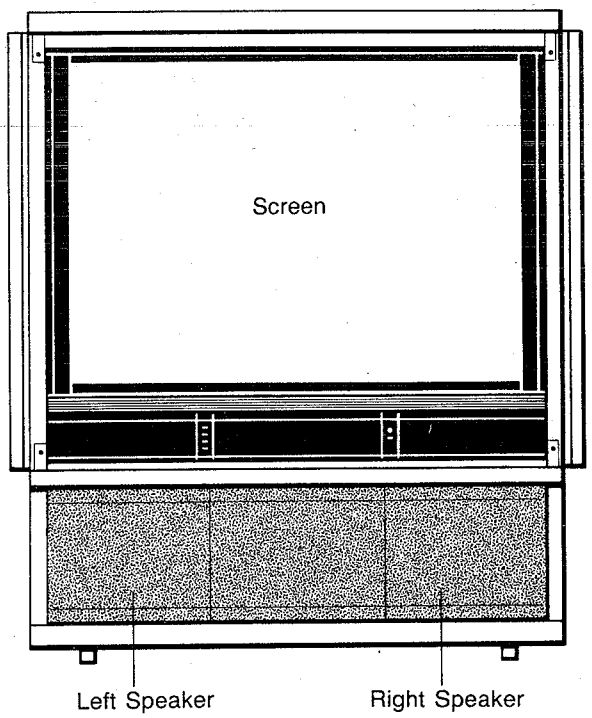
FRONT PANEL FACILITIES

A flip-down door conceals the control panel. Push gently and release to open the door.
To close the door, lift it back up into place.

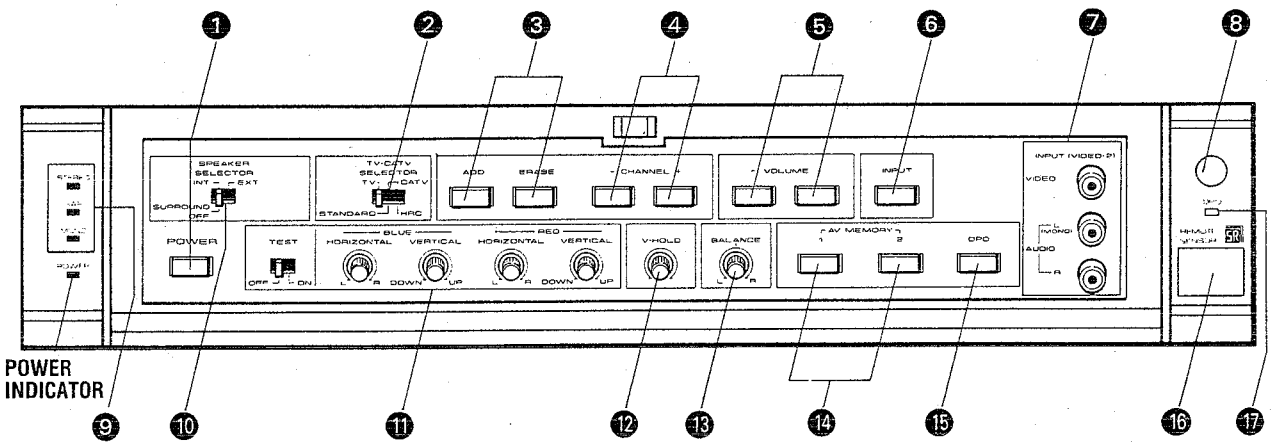


NOTE:

- *If you accidentally pull the door open then it may not shut properly. Push in when shutting the door to restore normal operation.*



Control Panel



★ Use the remote control unit to operate most functions. See the separate operating instructions for the remote control unit.

AV Memory

After adjusting the picture and sound quality you can store your settings in "AV memory." Two AV memory settings can be stored and recalled. Use the front panel buttons to save settings. Use the STD/AV MEM key on the remote control unit to recall them.

FRONT PANEL FACILITIES

❶ POWER SWITCH
Press once to turn on the power. Press again to turn off. The POWER indicator illuminates when the power is on.

❷ TV-CATV SELECTOR
Set to the position that corresponds to the kind of broadcasts you receive, regular TV or CATV (STANDARD or HRC).

❸ CHANNEL MEMORY BUTTONS
The ADD and ERASE buttons let you choose which channels are tuned in when you use the CHANNEL selector (+ and −) keys. (See page 19 for details.)
CHANNEL ADD: Includes the current channel in channel memory.
CHANNEL ERASE: Deletes the current channel from channel memory.

❹ CHANNEL SELECTOR
Press plus (+) or minus (−) to tune to a higher or lower channel. Only those channels in channel memory can be tuned in by this method. (See page 16 for details.)

❺ VOLUME CONTROL BUTTONS
Press the plus (+) or minus (−) button to raise or lower the volume.

❻ INPUT SELECTOR
Press to select your program source: TV, video disc player (VDP), VCR1, or VCR2. Each press of the button changes the selection to the next source.

❼ INPUT JACKS (VIDEO-2)
These front panel jacks are handy for a portable VCR or other temporary video source connection. The rear panel also has VIDEO-2 input jacks. These function identically to those on the front. But both the front and rear jacks can not be used at the same time.

❽ DPO SENSOR
This detects ambient lighting for the DPO (Dynamic Picture Optimizer) circuit which optimizes the TV picture accordingly.

❾ MTS (Multi-channel Television Sound) MODE INDICATORS
These illuminate to confirm the broadcast sound format.
STEREO: Means that the program on your currently selected channel is in stereo.
SAP: Means that the program on your selected channel includes SAP (second audio program) sound.
MONO: Means that mono mode is selected regardless of audio signal format of received program.

❿ SPEAKER SELECTOR
This lets you select either the built-in speaker or external speakers. (See page 13)
NOTE:
- *Set to INT when using the built-in speakers. Do not use the INT setting if using speakers connected to the rear panel external speaker terminals in a Dolby Surround sound reproduction system. (No sound will be heard from the external speakers.)*
- *Set to EXT if using external speakers, an external audio system, or surround speakers. At the EXT setting, no sound comes from the internal speakers.*

⓫ TEST PATTERN SWITCH AND CONVERGENCE CONTROLS
These controls are used to adjust the color convergence. Turning on the TEST switch (during active channel reception) puts a test pattern on the screen for adjustment. (See page 15 for details.)

⓬ VERTICAL HOLD CONTROL
Adjust this knob if necessary to stop the picture from rolling.

⓭ BALANCE CONTROL
Adjusts volume balance between the right and left speakers.

⓮ AV MEMORY SWITCHES (1 and 2)
These buttons let you store two sets of audio and video settings (AV MEMORY-1 and-2) for later recall. This can save you the trouble of readjusting the picture and sound for particular channels or program sources.

⓯ DPO (Dynamic Picture Optimizer) SWITCH
You can turn DPO on or off as desired. When DPO is on, it automatically adjusts the picture to compensate for room illumination. (See page 21 for details.)

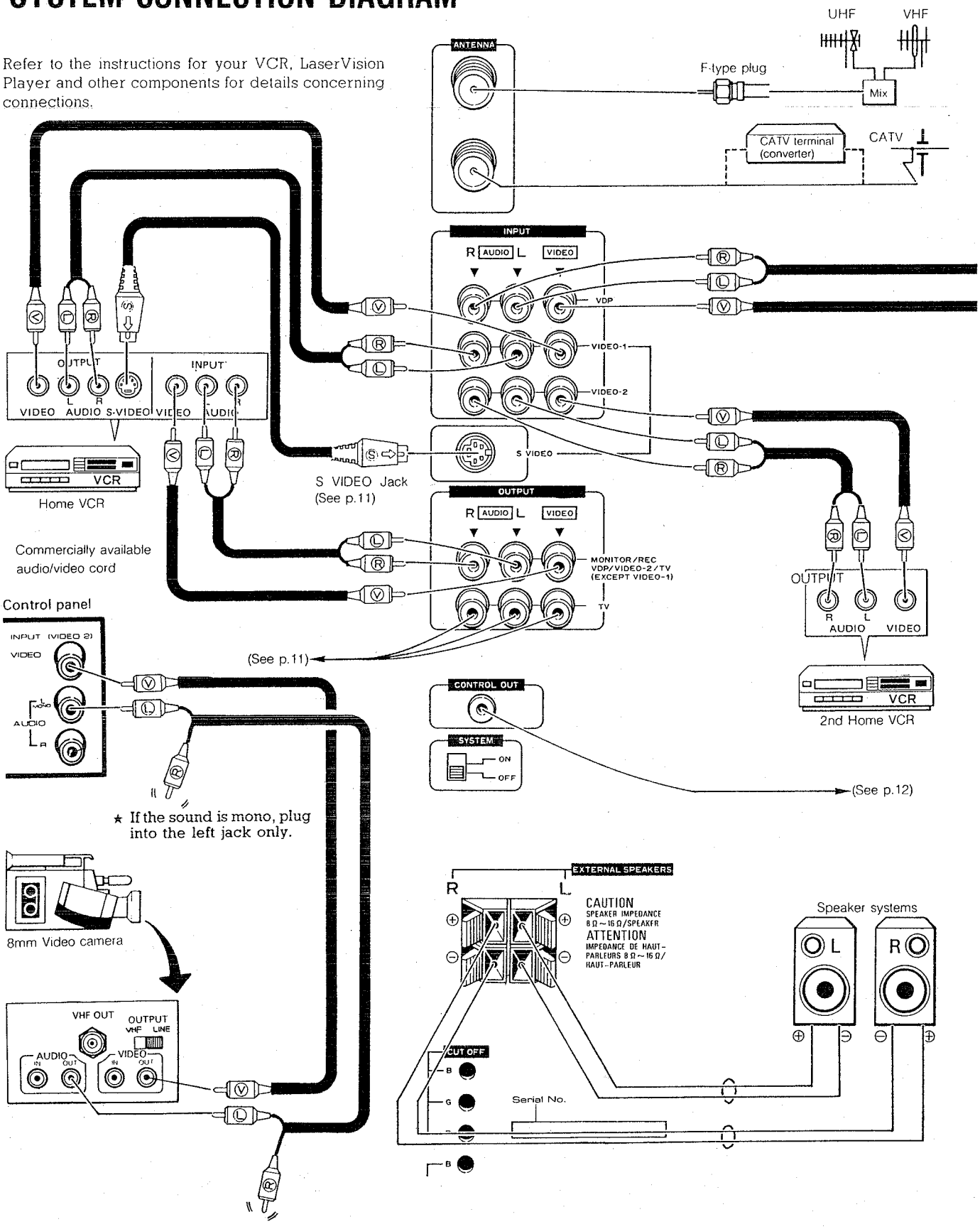
⓰ REMOTE CONTROL SENSOR
This sensor picks up infrared signals from the remote control unit.

⓱ DPO INDICATOR
Illuminates when DPO is on.

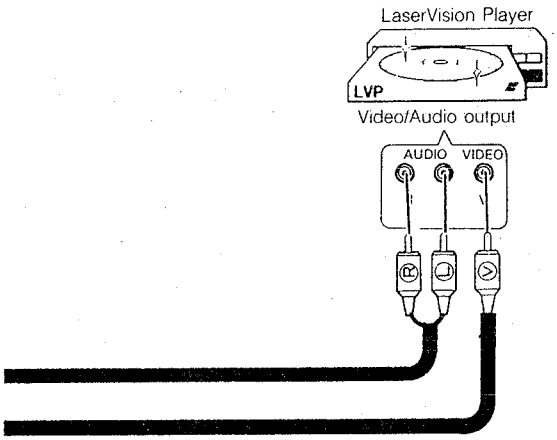
NOTE:
- *Very occasionally, an electrical discharge may occur inside the CRT. It makes a short, sharp pop and results in a 1- or 2-second power failure. The power will return automatically. You need not worry about the discharge for it is not a defect. It will disappear with regular use.*

SYSTEM CONNECTION DIAGRAM

Refer to the instructions for your VCR, LaserVision Player and other components for details concerning connections.

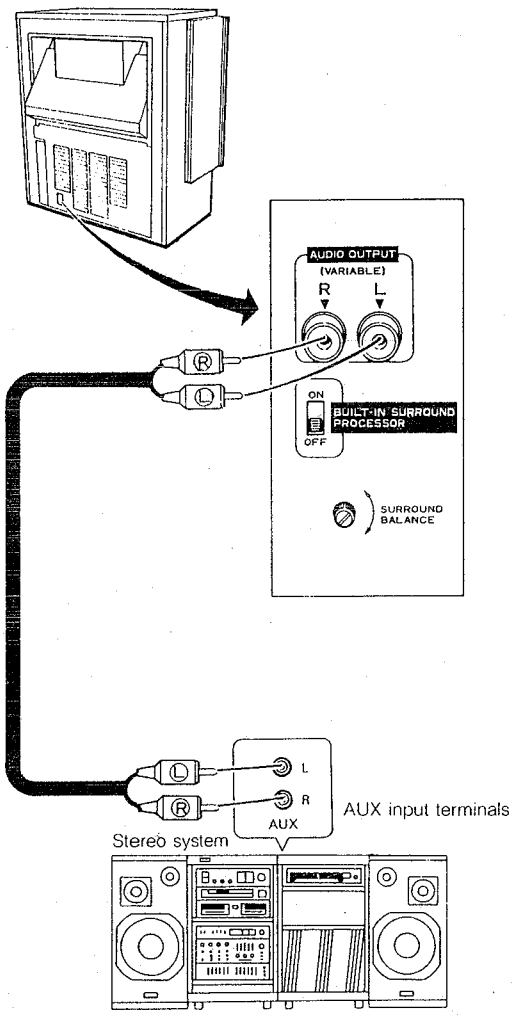


SYSTEM CONNECTION DIAGRAM



Connections for listening to Projection Monitor sound on a stereo system.

★ Turn off the surround sound switch for this configuration.



INPUT JACKS

These are two sets of inputs for VCRs, LaserVision players, and other video sources. Use RCA-type pin plug cords (same as in hi-fi systems) for connections.

MONITOR/REC OUTPUT JACKS

These are used for connecting a VCR for recording, or for linking to another monitor. These jacks provide the video and audio signals of the source currently selected by the INPUT SELECTOR.
If you have one VCR, connect these output jacks to your VCR's inputs. Connect the VCR's outputs to the monitor's VIDEO-1 inputs.
NOTE:
- *If a VCR is connected to the VCR2 input, then that VCR should not be connected to these outputs. The design of some VCRs causes an oscillation feedback loop in such situations.*

OUTPUT TV JACKS

These provide the video and audio signals from the currently selected TV channel.
(These do not provide the signals from sources connected to the input jacks.)

CONTROL OUT JACK

This jack is used to extend remote control to other PIONEER equipment bearing the SR (System Remote) mark.
Use mono miniplug cords (available at audio and video shops) to connect the monitor's CONTROL OUT jack to the CONTROL IN-jack of the other unit. The other unit can be connected to still another in the same manner, from the CONTROL OUT jack of one to the CONTROL IN jack of the other. If a unit has only a CONTROL IN jack then put that unit last in the sequence. Otherwise, you may connect in any order that is convenient.
If other equipment has the SR mark and its own remote control sensor, then the CONTROL OUT/IN jack connection is not required. However, this connection may improve the response of remote control, since you will not need to point the remote control unit at different components. (See page 12.)

AUDIO OUTPUT (VARIABLE) JACKS

These jacks provide the audio signal from the video program material currently selected for viewing on the monitor. Connect these audio output jacks to the AUX input jacks of your stereo system. You can then use the remote control unit to adjust the volume.

S VIDEO INPUT JACK

Use this jack for input of S-VHS or ED Beta VCR signals. (Connect the audio signal to the VIDEO-1 audio input jacks.)
The S VIDEO input jacks is given priority if there is also a connection to the standard VIDEO-1 input jack.

SYSTEM SWITCH

Used when connecting to some PIONEER amplifiers.
For details, refer to the "SYSTEM SWITCH" section on page 22.

EXTERNAL SPEAKERS TERMINALS (R, L)

For connection of external speakers (purchased separately).

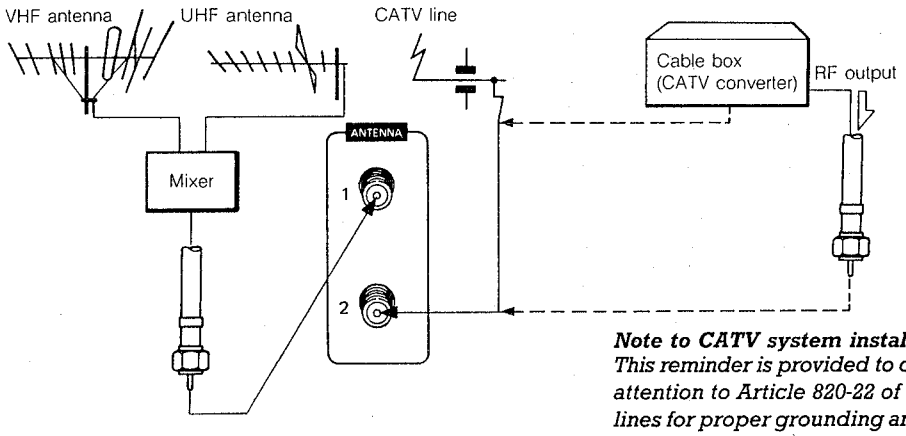
ANTENNA CONNECTIONS

A good color picture depends on a good TV signal. So does good multi-channel (stereo and SAP) sound. To assure the highest signal quality, choose an antenna that suits your reception area and have it properly installed. Ask your dealer for advice.
Of course, if you will be subscribing to cable or have a central antenna for your building, then you will not need an external antenna.
However, proper connections from your TV signal source to your monitor are essential. Please refer to the instructions below.

USING THE ANTENNA CABLE CONNECTOR

The cable connector plugs into one of the monitor's antenna terminals. This unit is designed to connect to a 75 ohm coaxial cable using an F-plug.

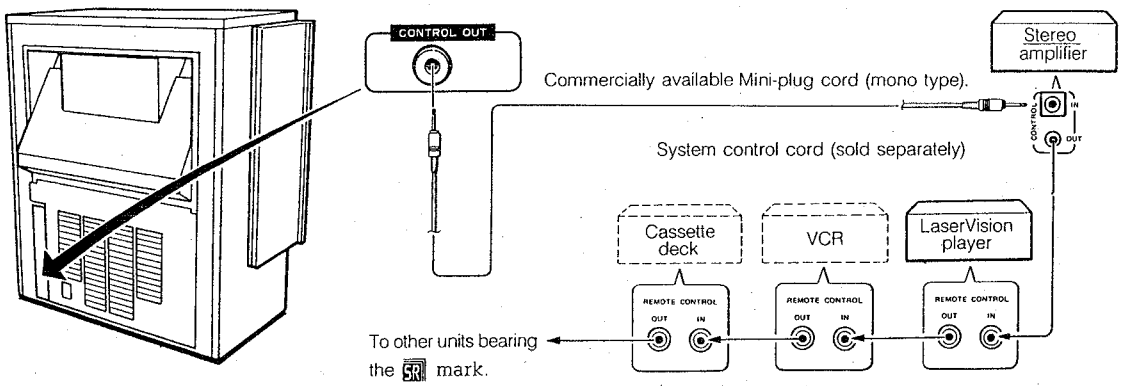
Plug the antenna cable connector into the ANTENNA 1 terminal. If you subscribe to cable, connect the cable box output to the ANTENNA 2 terminal.



Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

SYSTEM REMOTE CONTROL CONNECTIONS

Many PIONEER audio and video components can be connected to allow remote control of an entire audio/video system. Use mini-plug cords (monaural) which may be purchased in most audio and video stores. Connect from the REMOTE CONTROL OUT jack of one unit to the IN jack of the next unit.

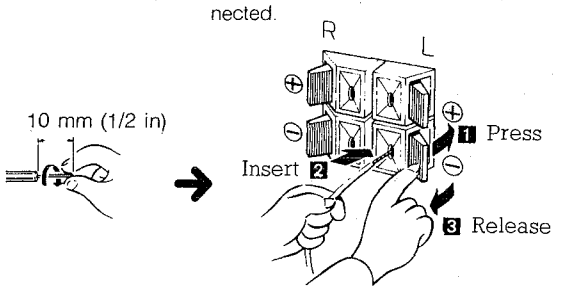


SPEAKERS

CONNECTING EXTERNAL SPEAKER WIRES

Strip each wire so that about half an inch is exposed. Twist the core.

Turn off power on the monitor and connected equipment.
Press lever, insert wire, and release lever to lock into place. Pull gently on the wire to check that it is securely connected.



Do this for each wire. Be careful to connect the right speaker's plus and minus terminal wires to the "R" "+" and "−" terminals. Likewise, connect the left speaker's plus and minus terminal wires to the "L" "+" and "−" terminals.

Precautions

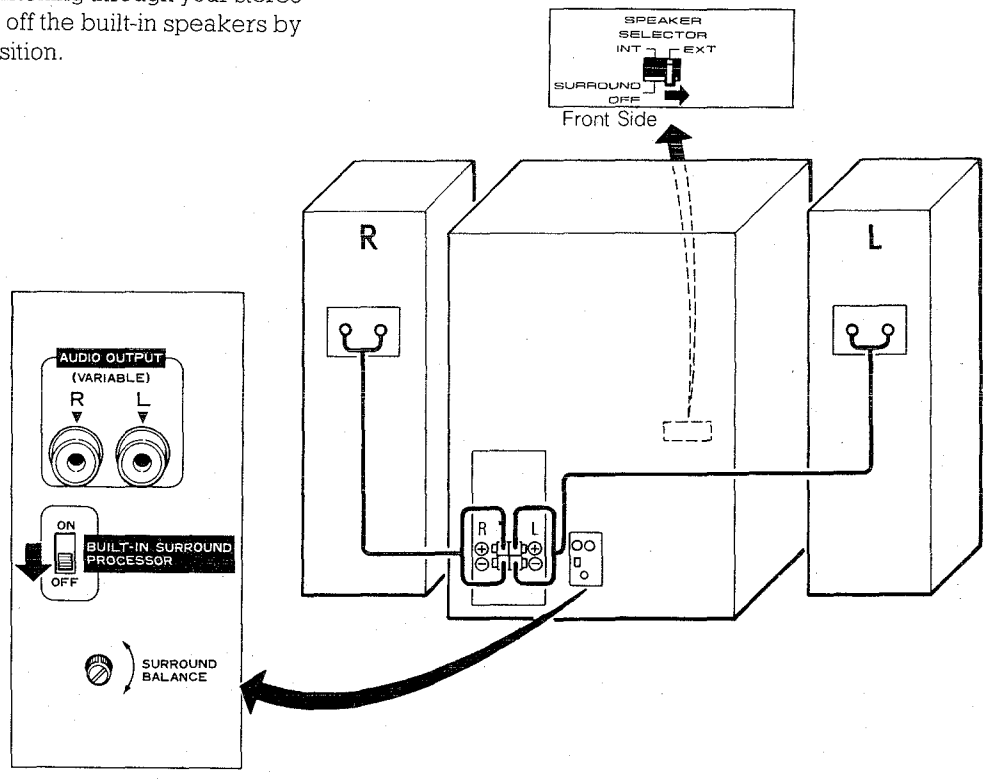
- Be sure that exposed wires do not protrude and touch each other.
- If you do not hear a normal stereo image when listening to a stereo program, it may be because the "+" and "−" connections are reversed for one of the external speakers.
- Be sure that the right speaker is connected to the "R" terminals and the left speaker to the "L" terminals. Be sure that each speaker's two wires are properly connected to the appropriate "+" and "−" terminals.

NOTES:

- ***Use speakers having an impedance rating of from 8 ohms to 16 ohms. Speakers having less than 8 ohms impedance may draw excessive current, triggering the monitor's protection circuit. The protection circuit cuts off output to prevent damage in case of short circuits or abnormally low impedance.***
- ***Ordinary speakers are not magnetically shielded and may disturb the picture if placed too close to the monitor. Move the speakers about two feet away from the monitor if you notice a problem.***

SPEAKER SELECTOR

Set this to the INT position if you will be listening to the built-in speakers. If you have connected external speakers (or if you will be listening through your stereo system), then you can turn off the built-in speakers by setting this to the EXT position.



★ Turn off the surround processor switch.

SURROUND SPEAKER SYSTEM

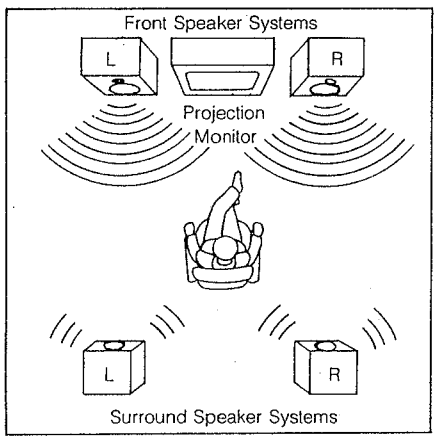
What is Surround Sound?

Ordinary stereo sound comes only from speakers in front of your listening position. However, in a concert hall or theater you also hear sound reflected off of walls, floor and ceiling. This reflected and reverberant sound gives the feeling of ambience or spaciousness of a live performance. Surround sound systems reproduce this additional sound information, creating a fuller, more "live" sound.

Speaker System Placement

The placement of the speakers in your system — their height, angles, and distances from walls — will have a great effect on the results that you hear. Speakers should be set slightly higher than your ear level when sitting at your viewing position.

Constructing a Surround System



Surround System Layout

In this diagram you are looking at the system from in back of the monitor. (Therefore, the left and right speakers appear reversed.)

In this surround system connection, the rear surround speakers are connected to the speaker terminals on the rear of this unit. The front speakers are connected to a stereo amplifier which is connected to this unit's audio output jacks.

DOLBY SURROUND

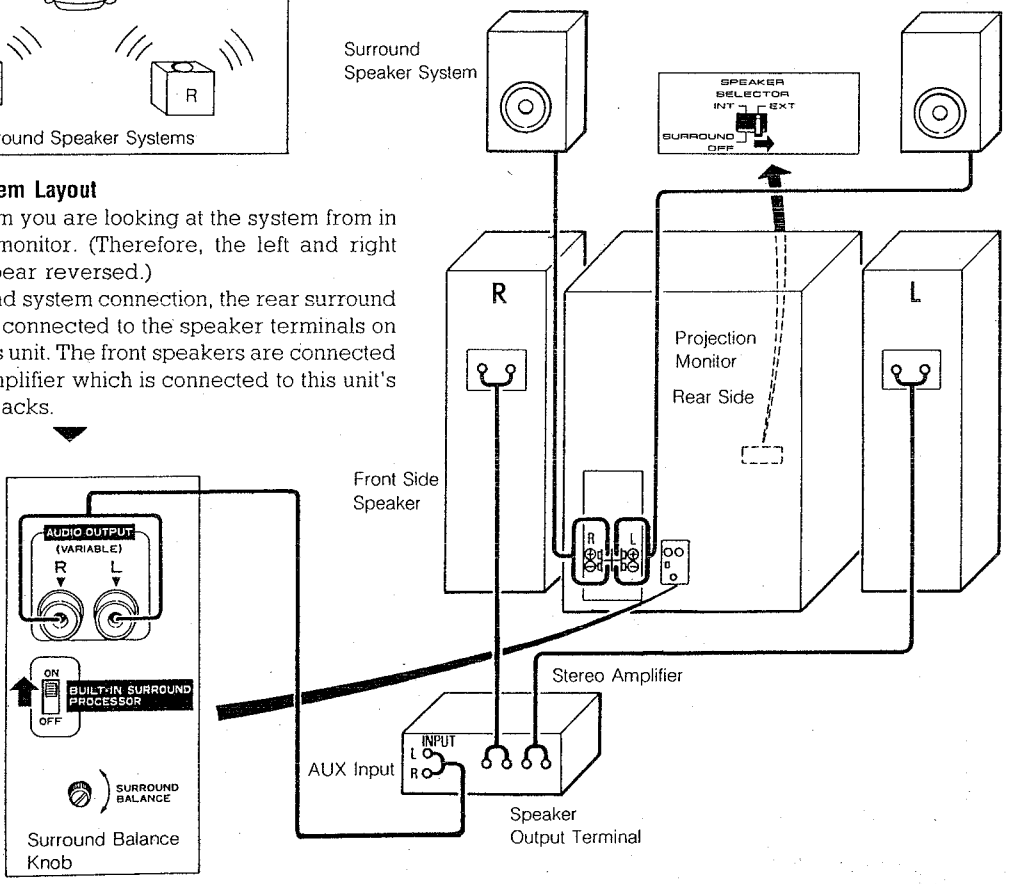
This Monitor is equipped with a built-in surround processor for Dolby Surround encoded movies and other program material. With an external stereo system and surround speakers you can enjoy the exciting realism of Dolby Surround. Make connections as shown on this page, turn on the rear panel surround processor switch and set the front panel speaker selector to EXT.

NOTE:

The built-in surround processor is most effective with recent movies and other stereo material that is Dolby Surround encoded. It will also produce rear speaker output with ordinary stereo sources. Rear output will not normally be heard with mono sources.

Surround Balance Adjustment

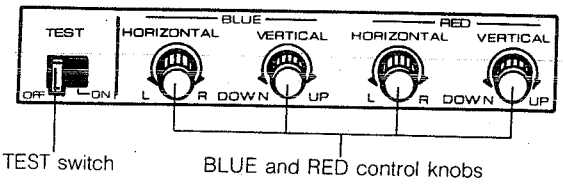
Play a Dolby Surround encoded videotape or VideoDisc. Adjust the rear panel surround balance knob so that during movie dialog you hear minimum sound from the rear surround speakers. Main dialog should seem to come from the monitor screen. When you see actors talk on the screen, their voices usually should appear to come from the screen area, not from the side and rear.



HOW TO ALIGN COLOR CONVERGENCE

This Projection Monitor uses three separate TV tubes. There is a red tube, a green tube, and a blue tube. The red, green and blue images are projected onto the screen where they converge to form a full color picture. If they do not converge correctly, then you see colored borders around the images.
Your dealer should adjust the color convergence when your set is delivered. However, convergence may drift over time or if you move the set.
Follow the steps below if color convergence alignment is needed.

1. Turn on the power and select an active channel. Wait a moment for the picture to stabilize.
2. Turn on the TEST switch on the control panel. If convergence is correct then there will be one vertical and one horizontal white line, as in figure 1.
3. If you see separate colored lines, then adjust the BLUE and RED control knobs marked HORIZONTAL and VERTICAL.
   Turn the knobs so that the red and blue lines disappear into the other lines. Convergence is correct when all three colors (red, green, and blue) converge, producing single white lines.
4. Turn off the TEST switch when convergence is correct.



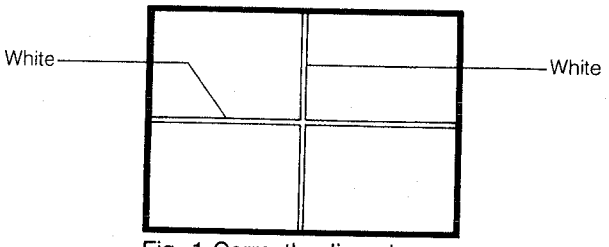


Fig. 1 Correctly aligned

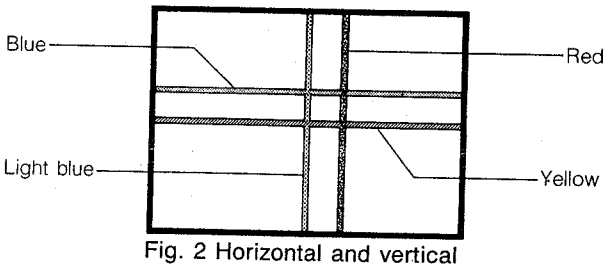


Fig. 2 Horizontal and vertical misaligned

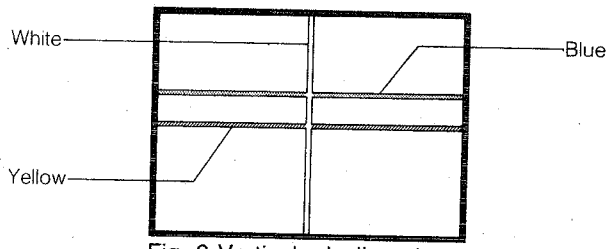


Fig. 3 Vertical misaligned

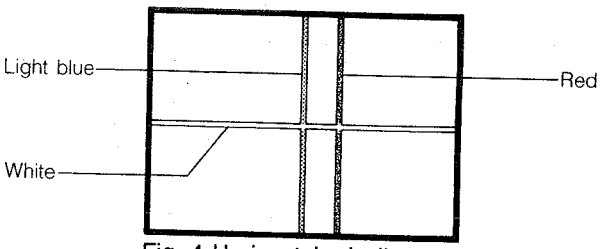


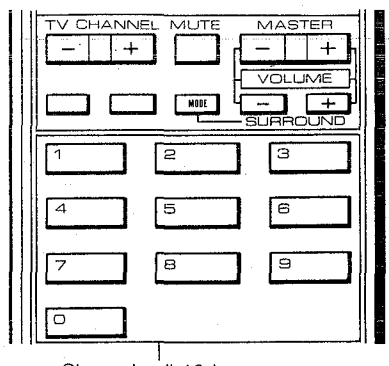
Fig. 4 Horizontal misaligned

TV CHANNEL SELECTION

The Projection Monitor uses a frequency synthesizer tuning system to permit reception of up to 125 channels (including cable channels). This electronic tuning system gives you two ways of selecting channels.
You can use the remote control keys numbered "0" through "9" to directly input the channel number.
Or you can use the two TV CHANNEL keys marked "−" and "+" to check one channel after another. In this case you can remove or add channels so that "CHANNEL MEMORY" contains only those channels that you usually watch.
The 125 possible channels include broadcast TV channels 2-13 (VHF), 14-69 (UHF), as well as cable (CATV) channels 1-13 (VHF), 14-22 (mid-band), 23-36 (super-band), 37-65 (hyper-band), and 94-99 (mid-band).

NOTE:

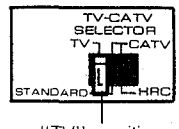
- *CHANNEL MEMORY refers to channel access by pressing the CHANNEL keys marked "+" and "−". You can specify which channels are to be included in CHANNEL MEMORY before using this function. Details follow.*



Channel call 10 keys

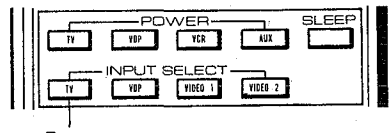
BROADCAST TV CHANNEL SELECTION

1 Set the TV-CATV SELECTOR to the "TV" position. This selector is behind the control panel door on the front panel.



"TV" position

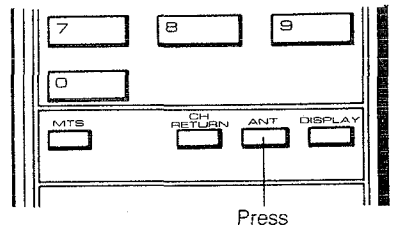
2 Press the TV input selector key on the remote control.



Press

3 Press the Antenna (ANT) selector key on the remote so that "ANTENNA-1" appears on the monitor screen. (This is assuming that your antenna is connected to the ANTENNA 1 terminal on the rear panel.)

4 Select channels directly by pressing the channel number on the remote control "CHANNEL CALL" 10-key pad. For example, to receive channel "23," press 2 and then 3. For channels 2 through 9, first press zero, then the number. Or just press the number and wait for about four seconds.
(While waiting for you to input a second digit, the first digit blinks. If you do not input a second digit within four seconds, then the first digit is selected as the channel number.)

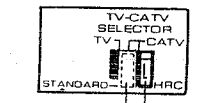


Press

5 Channel memory selection is also possible. Using the CHANNEL keys marked "+" and "−" you can scan through the channels which are in channel memory. To add or delete channels in memory, see CHANNEL MEMORY SETTING on page 19.

TV CHANNEL SELECTION

CABLE (CATV) CHANNEL SELECTION

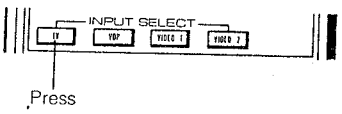


STANDARD position — HRC position

1 **Set the TV-CATV SELECTOR to the "CATV STANDARD" or "HRC" position.** (Ask your dealer or cable service provider which is correct for your local CATV system.) This selector is behind the control panel door on the front panel.

2 **Press the TV input selector key on the remote.**

3 **Press the Antenna (ANT) selector key on the remote so that "ANTENNA-2" appears on the monitor screen.** (This is assuming that your cable converter box is connected to the ANTENNA 2 terminal on the rear panel.)



4 **Select channels directly by pressing the channel number on the remote control 10-key pad.** For example, to receive channel "23," press the 2 and then 3. For channels 1 through 9, first press zero, then the number. Or just press the number and wait for about four seconds. Note that channel numbers "00," and "66" through "93" are not assigned. So the selected channel will not change if you input these numbers.
You can select VHF channels (1-13), mid-band channels (A1-A6, A-I), super-band channels (J-W), and hyper-band channels (AA-CCC). Refer to the standard cable channel assignment table shown here. Your local service provider's channel assignments may differ from those shown in the table.

5 **Channel memory selection is also possible.** Using the CHANNEL keys marked "+" and "–" you can scan through the channels in channel memory. To add or delete channels in memory, see CHANNEL MEMORY SETTING on page 19.

CABLE (CATV) CHANNEL ASSIGNMENT TABLE

Channel number assignment for the cable tuning mode begins with 01 through 65, omits the unassigned numbers 66 through 93, then proceeds from 94 through 99. The specific channel number assignments and the corresponding alphabetical designation are shown below in the channel table.

	VHF L	MID		VHF H	SUPER	HYPER			UHF
TV	2 ~ 6	—		7 ~ 13	—	—			14 ~ 69
CATV	2 ~ 6 (STD)	A-6 (94)	A (14)	7 ~ 13	J (23) Q (30)	AA (37)	KK (47)	TT (56)	—
		A-5 (95)	B (15)		K (24) R (31)	BB (38)	LL (48)	UU (57)	
		A-4 (96)	C (16)		L (25) S (32)	CC (39)	MM (49)	VV (58)	
		A-3 (97)	D (17)		M(26) T (33)	DD (40)	NN (50)	WW (59)	
		A-2 (98)	E (18)		N(27) U (34)	EE (41)	OO (51)	XX (60)	
	1 ~ 6 (HRC)	A-1 (99)	F (19)		O(28) V (35)	FF (42)	PP (52)	YY (61)	
			G (20)		P (29) W(36)	GG (43)	QQ (53)	ZZ (62)	
			H (21)			HH (44)	RR (54)	AAA(63)	
			I (22)			II (45)	SS (55)	BBB (64)	
						JJ (46)		CCC(65)	

For example: Channel number "14" corresponds with mid-band cable channel "A".

NOTE:

- *Cable (CATV) services can vary from area to area. The channel number assignments shown in the channel table may not correspond with the channel numbers used by your local cable company. Direct tuning to cable channels without the use or the cable company "converter" or "preselector" will depend on the specific channels in use by the cable company. Direct tuning to cable channels is limited to unencoded (unscrambled) channels only. Check your local cable company compatibility requirements.*

TV CHANNEL SELECTION

MULTI-CHANNEL TV SOUND (MTS)

A multi-channel TV sound decoder is built into the Projection Monitor.
This MTS decoder permits stereo and SAP sound reception. (SAP is a "second audio program" often used for a second language.) The MTS decoder is only effective if the broadcast includes stereo or SAP signals. For regular (mono) sound signals you can simulate a stereo effect by turning on the SIMULATED STEREO switch.
LED indicators on the front panel confirm STEREO, SAP, and MONO modes.

NOTE:

- ***Broadcast stereo and SAP reception operate in accordance with the Broadcast Television Systems Committee (BTSC) stardard only. Stereo audio transmission from CATV (Cable television) systems can vary from area to area and may not be compatible with the BTSC standard.***
  Check with your local cable company for specific compatibility requirements.

STEREO RECEPTION

If necessary, use the remote control MTS key to switch to the MAIN setting. The set will switch automatically between mono and stereo according to the signals received.

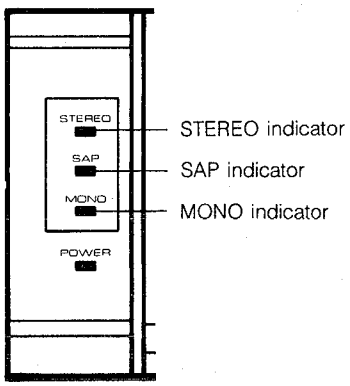
SAP (SECOND AUDIO PROGRAM) RECEPTION

TV stations have the option of broadcasting a second audio program (SAP) signal. This additional sound channel accompanies another mono signal or stereo signal. However, the SAP sound itself is in mono.

Use the MTS key to switch to the SAP or MAIN/SAP setting if you wish to hear "second audio program" sound. (At the MAIN/SAP setting, the SAP sound will come from the right stereo speaker while the left speaker produces the main sound signal.)
You will still hear stereo or mono sound when there is no SAP signal.

MONO RECEPTION

You can force monophonic reproduction of all programs by using the MTS key to select MONO.

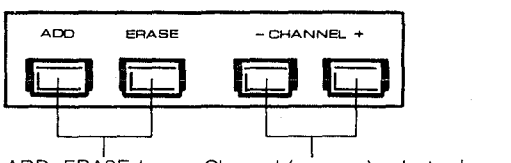


Audio Reception Mode Display (selected by the MTS key)

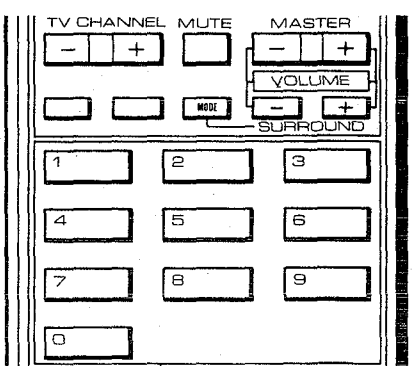
Broadcasted mode / Mode selected		MONO	STEREO	MONO + SAP	STEREO + SAP
MAIN	Display	TV ○ ○ MAIN	TV ○ ○ MAIN	TV ○ ○ MAIN	TV ○ ○ MAIN
	REPRODUCTION Mode	MONO	L, R	MAIN (MONO)	L, R
SAP	Display	TV ○ ○ SAP	TV ○ ○ SAP	TV ○ ○ SAP	TV ○ ○ SAP
	REPRODUCTION Mode	MONO	L, R	SAP	SAP
MAIN/SAP	Display	TV ○ ○ MAIN/SAP	TV ○ ○ MAIN/SAP	TV ○ ○ MAIN/SAP	TV ○ ○ MAIN/SAP
	REPRODUCTION Mode	MONO	L, R	L. MAIN (MONO) R. SAP	L. MAIN (MONO) R. SAP
MONO	Display	TV ○ ○ MONO	TV ○ ○ MONO	TV ○ ○ MONO	TV ○ ○ MONO
	REPRODUCTION Mode	MONO	MONO	MONO	MONO

CHANNEL MEMORY

You can customize this special tuning system so that it will select only your personal choice of channels. When the Projection Monitor leaves the factory, all possible channels are in CHANNEL MEMORY.
You can delete channels from CHANNEL MEMORY by tuning them in and then pressing the ERASE key.
You can add channels to CHANNEL MEMORY by using the 10-key pad to tune them in and then pressing the ADD key.
Press the CHANNEL keys marked "+" and "−" to scan through the channels that are currently in CHANNEL MEMORY.



ADD, ERASE keys Channel (memory) selector keys



Channel call 10 keys

CHANNEL MEMORY SETTING

Channel memory is intended for you to set to match your personal preferences among the channels available in your area. Please refer to your local TV or cable program guide. Follow the procedures below to customize channel memory to your requirements.

Removing Channels from Channel Memory

1. Use the CHANNEL "+" or "−" key to tune in the channel that you wish to delete from channel memory.
2. Press the ERASE key.
3. Repeat the above steps to delete additional undesired channels.
   You are free to add and delete channels as you like.

Putting Channels into Channel Memory

1. Turn on the monitor. (If necessary, open the control panel door and set the TV-CATV selector to the TV or CATV [STD or HRC] position, as appropriate.)
2. Select a channel by pressing the number keys on the remote control.
3. Press the ADD key to put the currently selected channel into memory.
4. Now you can recall your desired channels by pressing the CHANNEL "+" and "−" keys.

OTHER MEMORY FEATURES

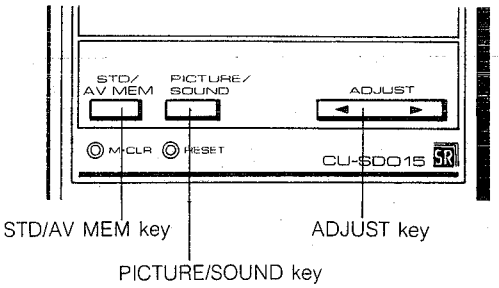
The Projection Monitor also remembers many other settings related to day-to-day operation. So when you turn the set on, it comes up with your previous channel and volume settings. It also remembers your previous picture quality settings.

PICTURE AND TONE ADJUSTMENT

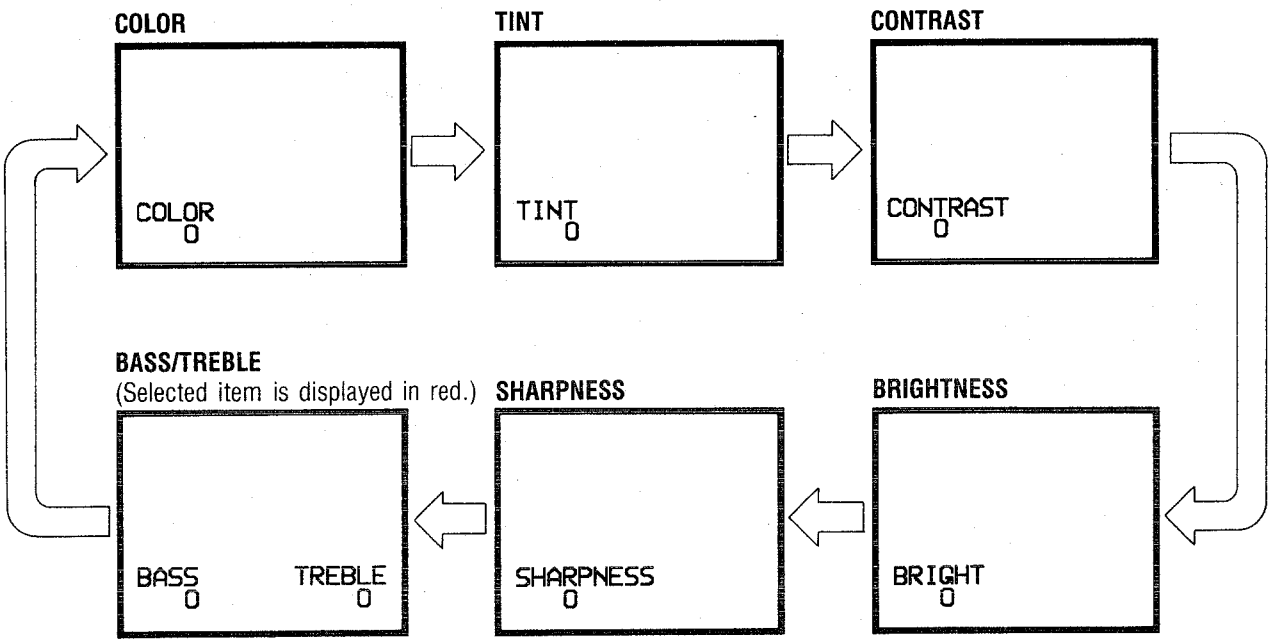
On the remote control is a PICTURE/SOUND key. Each time you press this key, the screen will show a different item for you to adjust. These items are color, tint, contrast, brightness, sharpness, and bass & treble. To adjust the item shown on the screen, you press either side of the key marked ADJUST. Press the right side to raise the value of the item. Press the left side to lower it. Set each item to any value that you like; the current value is shown on the screen.
To return to the standard settings made at the factory, simply press the STD/AV MEM key on the remote, so that the screen shows STD.

NOTE:

- *The Projection Monitor has been adjusted before shipping. Please make additional adjustments to suit your personal taste.*



SCREEN INDICATIONS FOR PICTURE AND SOUND ADJUSTMENT



NOTE:

- *If the color seems wrong but can not be fixed by color or tint adjustment, then you may need to align the color convergence (See page 15).*

AV MEMORY

After making adjustments, you can store your picture and tone quality settings in the AV MEMORY presets. Follow the procedure below.

Storing a Setting

1. Watch a TV show, video tape, or video disc.
2. Adjust the picture and tone by using the PICTURE/SOUND key and the ADJUST key.
3. Press one of the two AV MEMORY keys while holding down both the volume + and − keys on the control panel.

Upon completion of memory storage, AV MEMORY 1 or 2 will be displayed momentarily.

Recalling a Setting

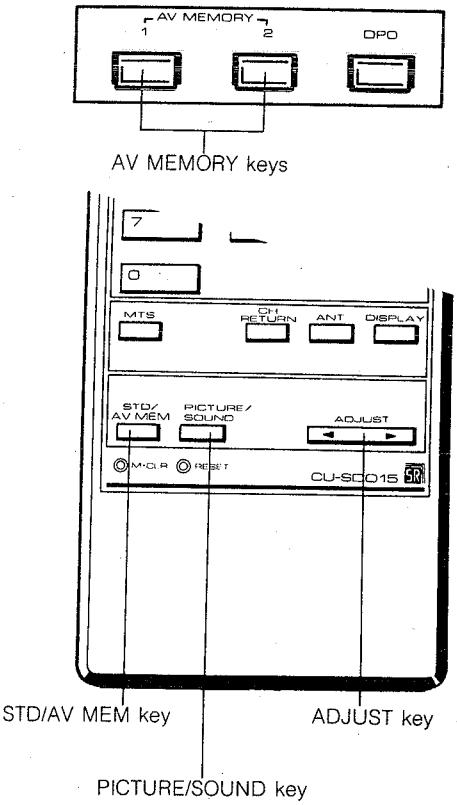
Press the STD/AV MEM key on the remote control unit. Each press of the STD/AV MEM key moves the selection from STD to AV MEMORY 1, to AV MEMORY 2 and then back around to STD again. (Press the key while the previous legend is still on the screen. Otherwise, it will return to the STD setting.)

Returning to the Standard Setting

Press the STD/AV MEM key so that the screen shows STD.

NOTE:

- ***AV Memory settings do not affect the signals sent out from the Projection Monitor's output jacks.***



DPO ADJUSTMENT

When the DPO switch is on, the monitor automatically adjusts the contrast, brightness and color to match room lighting conditions. This is done according to factory preset specifications which ordinarily do not need to be changed. However, if the DPO is giving you too bright a picture under dim lighting conditions, you can change its response by following these directions.

1. Under dim room lighting, watch a TV show, video tape, or video disc.
2. Use the PICTURE/SOUND key and the ADJUST key to adjust the color, contrast, and brightness.
3. Press the DPO switch while holding down both the volume + and − keys on the control panel. (DPO will be turned off by this procedure.)

Upon completion of adjustment, DPO ADJ will be displayed momentarily.
Now when DPO is on, it will reproduce your setting under dim lighting conditions.

SYSTEM SWITCH

This switch is important only if you will be using the Projection Monitor as a video display monitor for a PIONEER audio/video system.

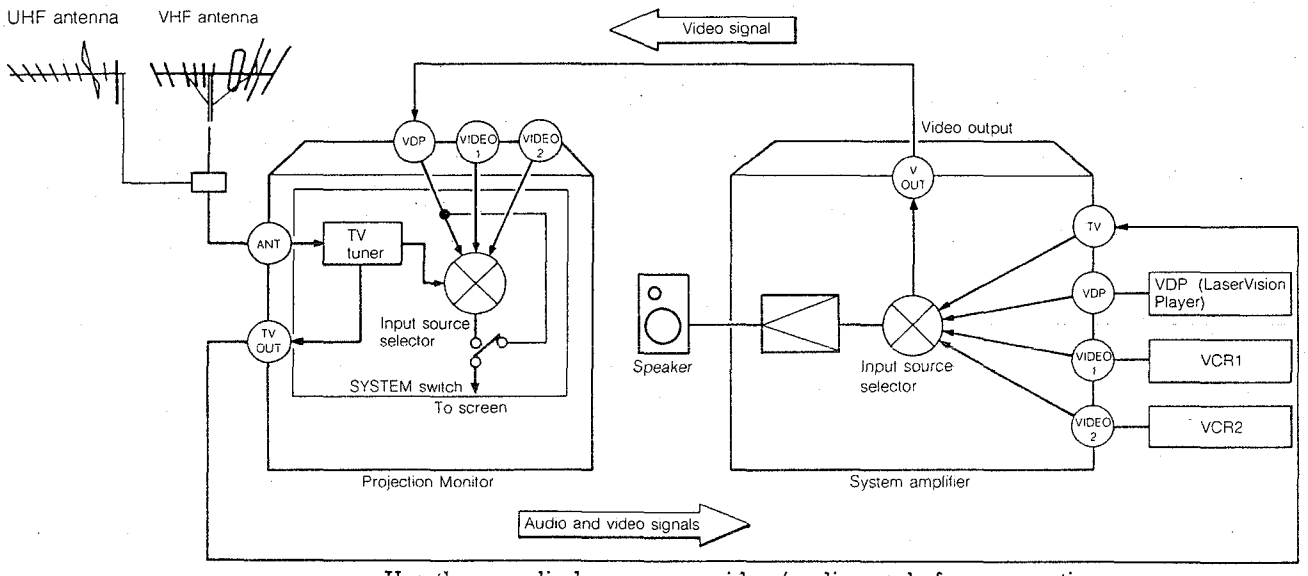
Connection to a PIONEER System Amplifier

1. Turn on the Projection Monitor's SYSTEM switch (on the rear panel).
2. Connect the Projection Monitor's TV OUTPUT jacks to the TV INPUT jacks of the amplifier. (Use the supplied video and audio cords or standard RCA stereo pin plug cords for this purpose.)
3. Connect the amplifier's VIDEO OUTPUT jacks to the Projection Monitor's VDP INPUT jacks.

Using the System

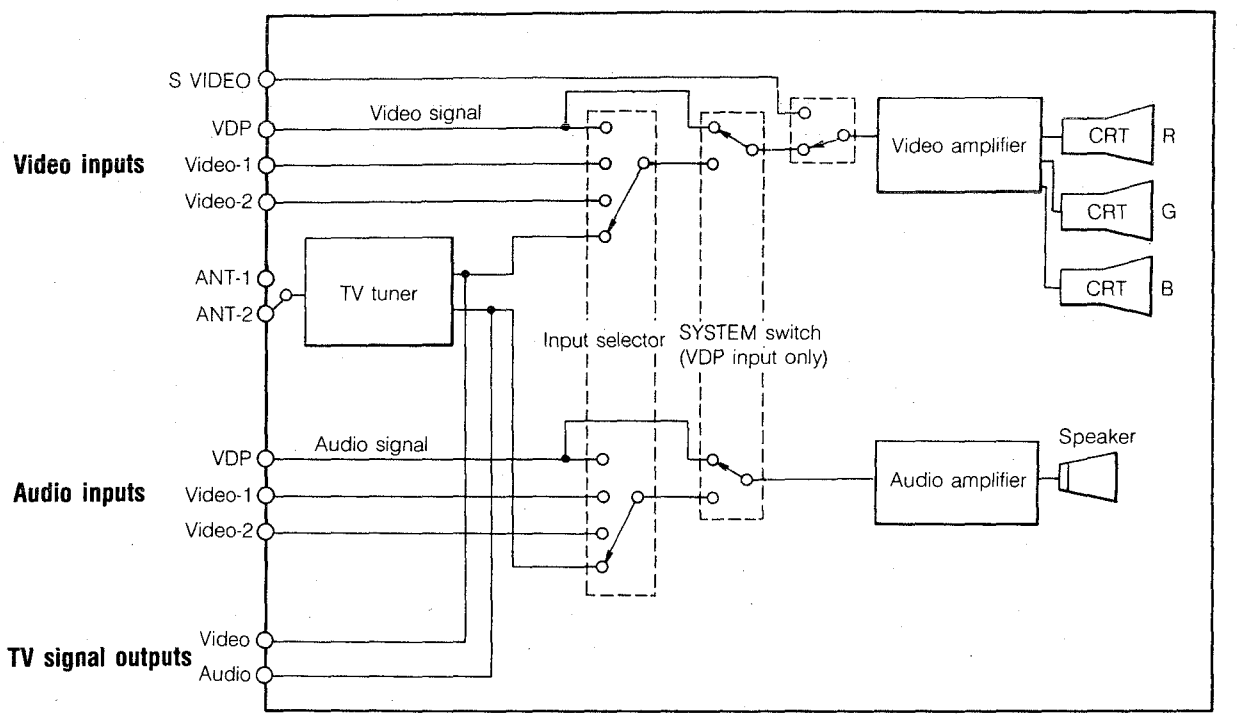
1. Use the Projection Monitor's remote control to select TV as the input source.
2. Select your desired video source on the amplifier.
3. The TV screen will continue to give you information about your Projection Monitor settings including channel and antenna selection. It will not confirm MTS (main, stereo, SAP, etc.) modes, though they are still effective.
(TV/CABLE settings are also effective but snow will appear on the screen if an empty channel is selected. Audio muting remains effective.)

Antenna or Cable Signal



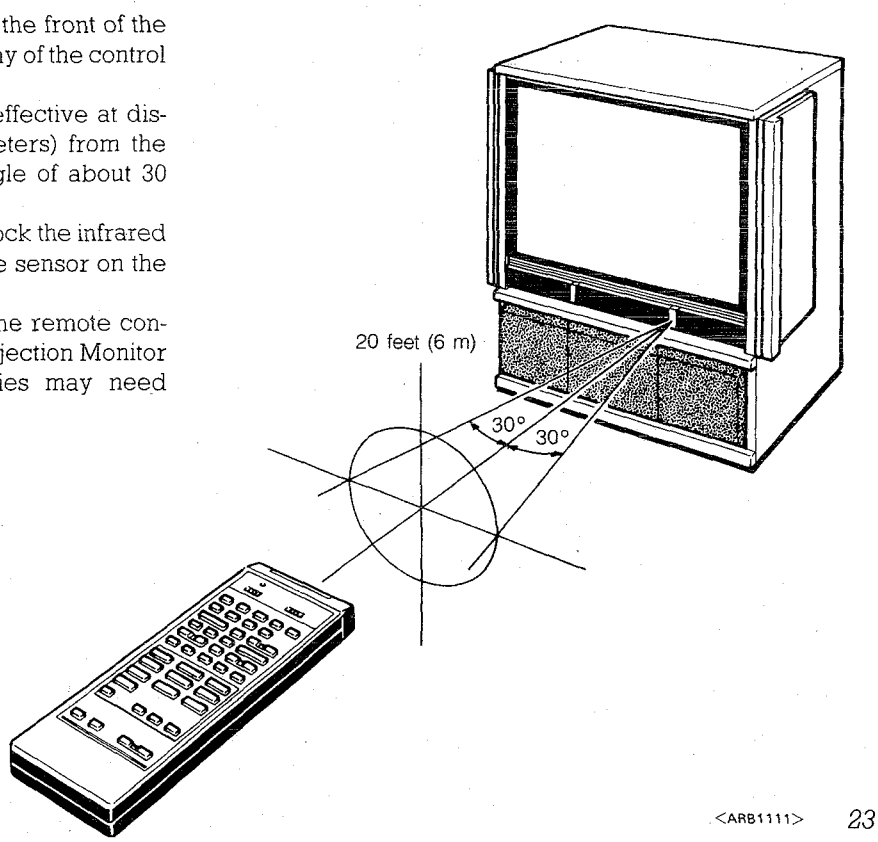
Use the supplied accessory video/audio cords for connections.

BLOCK DIAGRAM



REMOTE CONTROL OPERATION RANGE

- Point the remote control unit toward the front of the Projection Monitor when you press any of the control keys.
- The remote control unit should be effective at distances of up to about 20 feet (6 meters) from the Projection Monitor and over an angle of about 30 degrees from the front panel.
- Furniture and other obstacles may block the infrared light beam so that it cannot reach the sensor on the Projection monitor's front panel.
- If there is no response even when the remote control is used directly in front of the Projection Monitor then the Alkaline dry cell batteries may need replacement. (See page 7.)



TROUBLESHOOTING

Please check the following chart and try the suggested solutions before consulting a PIONEER authorized service center.
Often you can fix the problem by making a simple adjustment on the Projection Monitor. Faulty connections may be to blame. Or it may be another piece of equipment that is causing the trouble.

SYMPTOM	POSSIBLE CAUSE AND SUGGESTED SOLUTION
NO PICTURE	AC power cord is not plugged into the wall socket. Plug in AC power cord. Power switch is off. Turn on power switch on the Projection Monitor. Or turn on power switch on remote control unit. Selected video signal source is not connected to input jacks or source unit (VCR, etc.) is not turned on or not providing a signal. Check connections and source unit operation. Switch off SYSTEM switch.
COLOR IS WASHED OUT	Color value is too low. Use PICTURE/SOUND key and ADJUST key to increase COLOR value. Brightness value is too high. Use PICTURE/SOUND key and ADJUST key to reduce BRIGHT value.
COLOR TINT IS WRONG	Tint value is too high or low. Use PICTURE/SOUND key and ADJUST key to adjust TINT value.
STATIC IN TV PICTURE	Interference from motor vehicles, neon signs, etc. Try changing the height or direction of the TV antenna. Move the antenna away from the source of interference.
GHOSTING ON SCREEN	This "multipath" distortion is caused when the TV signal is received along two paths, directly and after being reflected from tall buildings, mountains or other obstacles. Strong winds may have changed the direction of the TV antenna. Try changing the height or direction of the antenna. An antenna with better directional characteristics may be required.
COLORED STRIPES ON SCREEN	Interference from other radio or TV signals. Try changing the height or direction of the antenna. Try changing to a coaxial antenna cable. Coaxial cable is shielded to minimize pickup of interfering signals.
COLORED EDGES ON IMAGES	Color convergence needs adjustment. Tune in a channel, turn on the TEST switch, and adjust by using the BLUE and RED convergence controls on the control panel. (See page 15 for details.)
UNCLEAR PICTURE	Connections are loose or cables are damaged. Check connections and try using new cables. Antenna may be damaged. Check antenna.
POOR PICTURE OR COLOR QUALITY	Interference from a nearby speaker or other source of magnetism. Move source of interference away from the monitor.
NO SOUND	Front panel SPEAKER SELECTOR is set to EXT, but external speakers are not connected. Set selector to INT.
NO ON-SCREEN CHANNEL OR OTHER DISPLAY; SLEEP TIMER DOESN'T OPERATE	Strong light striking the remote control sensor may cause the internal microcomputer to malfunction. Change the position of the Projection Monitor or the change the lighting so that the sensor is not exposed to strong light sources.
NO SOUND FROM SURROUND SPEAKERS	Rear panel surround processor switch is off. Turn on the surround processor switch.

CARE OF YOUR PROJECTION MONITOR

DO NOT:

- Do not use strong cleansers, solvents, polishes, or chemically treated cloths to clean the screen or cabinet.
- Do not touch or scratch the screen.
- Do not fasten or place rubber or vinyl items on the monitor.
- Do not use tape on the monitor.

DO:

- Use a soft cloth to dust the screen and cabinet.
- If necessary, unplug the monitor and wipe with a soft cloth moistened with warm water (and mild soap if dirt has built up). Dry with a soft, dry cloth.
- Treat the screen with care to avoid scratches or damage.
- Ask your local dealer to clean the interior of the monitor if maximum picture brightness decreases. This may be caused by dust build-up inside.

SPECIFICATIONS

DISPLAY SECTION

Reception system ..... American TV standard NTSC color
Screen size ..... 45″ (SD-P452)
50″ (SD-P502)
CRT ..... 7″ CRT x 3
Brightness (White peak) ..... 350 foot-Lambert
[100% Window signal input (SD-P452)
contrast, bright Max.] 300 foot-lambert (SD-P502)
Actual viewing angle ..... Horizontal H = 120°
Vertical V = 50°
Horizontal resolution ..... 650 lines (SD-P452)
[Input digital test pattern 700 lines (SD-P502)
(900 lines resolution)]
Input terminals ..... 3 video input systems,
S (VIDEO) input Jack (Y/C separate INPUT) x 1
3 audio input systems
Output terminals ..... Video output (recording),
TV output, audio output,
System remote control terminals ..... OUT
Input signal ..... Video signal: 1.0Vp-p ±0.2V
(75 ohms load)
Audio signal: 500mVrms
Input impedance ..... Video input: 75 ohms ±10%
Audio input: 50 k ohms or more
Input signal polarity ..... Synchronized negative
Output terminal signal ratings:
Output terminals (except VIDEO 1) .....
Video signal: 1Vp-p (75 ohms load)
Audio signal: 500mVrms (100% modulation)
TV output terminal Video signal: 1Vp-p (75 ohms load)
Audio signal: 500mVrms (100% modulation)
Output impedance ..... Video input: 75 ohms ±10%
Audio input: 15 kohms or more
Audio output terminal ..... Audio signal: 630mVrms
(VARIABLE) (100% modulation
Volume MAX.)

TUNER SECTION

Circuit type ..... Video signal detection:
PLL full synchronous detection
PLL Digital Synthesizer system
Audio multiplex: BTSC system
Reception channels .....
VHF; CH2~CH13, UHF; CH14~CH69
CATV (STANDARD or HRC switchable)
CATV A-6 CH~CCC (W+29) CH
Antenna terminals .....
ANTENNA 1, 2 terminal, 75 ohms UNBAL, F-type connector
(VHF, UHF MIXED)

AMPLIFIER SECTION

Effective output (both channels driven)
10W + 10W (THD. 1% 50Hz to 15,000Hz, 8 ohms)
Tone control: BASS ..... +8dB, −10dB (100Hz)
TREBLE ..... +8dB, −10dB (10kHz)
Built-in speaker system.. 16cm (6-1/2in) full range type x 2
Speaker terminals .....
Also used for surround (rear) speaker connection.
External speaker impedance ..... 8 ~ 16 ohms

ELECTRICAL SECTION, MISCELLANEOUS

Power requirements ..... AC 120V, 60Hz
Power consumption 275W
External dimensions .....
SD-P452 (model with doors) .....
1070(W) x 1275(H) x 652(D) mm
42-1/8(W) x 50-3/16(H) x 25-11/16(D) inches
SD-P452 (model without door) .....
1070(W) x 1255(H) x 629(D) mm
42-1/8(W) x 40-13/32(H) x 24-3/4(D) inch
SD-P502 (model with doors) .....
1171(W) x 1354(H) x 682(D) mm
46-1/8(W) x 53-5/16(H) x 26-13/16(D) inches
SD-P502 (model without door) .....
1171(W) x 1334(H) x 659(D) mm
46-1/8(W) x 52-9/16(H) x 25-15/16(D) inches
Weight of main unit
SD-P452 (model with doors) ..... 100kg (220 lb 8 oz)
SD-P452 (model without door) ..... 89kg (196 lb 4 oz)
SD-P502 (model with doors) ..... 117kg (258 lb)
SD-P502 (model without door) ..... 104kg (229 lb 5 oz)

ACCESSORIES

Operating Instructions 1
Remote control unit operating instructions 1
Warranty card 1
Remote control unit 1
AM-3, "AA" size (IEC LR6 1.5V) Alkaline dry cell
batteries 2
Safeguard Card 1

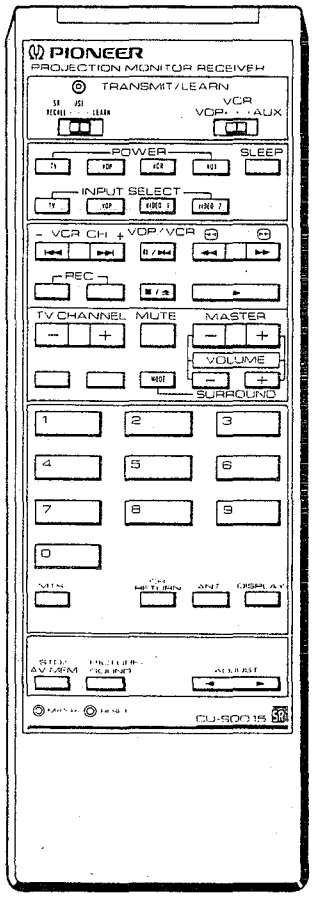
NOTE:
Specifications and design subject to possible modifications without notice due to improvements.

SD-P502-QD

PIONEER
The future of sound and vision.

CU-SD015

AUDIO VIDEO PROGRAMMABLE REMOTE CONTROL UNIT
BOITIER DE TELECOMMANDE PROGRAMMABLE AUDIO-VIDEO



Operating Instructions
Mode d'emploi

Introduction

Thank you for choosing Pioneer to meet your home entertainment system needs. Through using the diverse functions of the accompanying remote control unit, you will undoubtedly discover that with it you have a small piece of equipment that provides a very large boost to your enjoyment of home audio and video.
It can only be effective, however, if your components have functions that correspond to its keys and are infrared remote-controllable.

Contents

Handling the Unit 2
Basic Operation 3
Projection Monitor Operation 4
VDP Operation 6
VCR Operation 7
Programming Commands 8
Specifications 11

Handling the Unit

Effective Range

The unit may be used from anywhere within approximately 6 meters (20 feet) from the remote sensor, of the receiving component within angles of approximately 30° on either side of the sensor. (The front of the unit should be pointed at the front panel of the receiving component.)

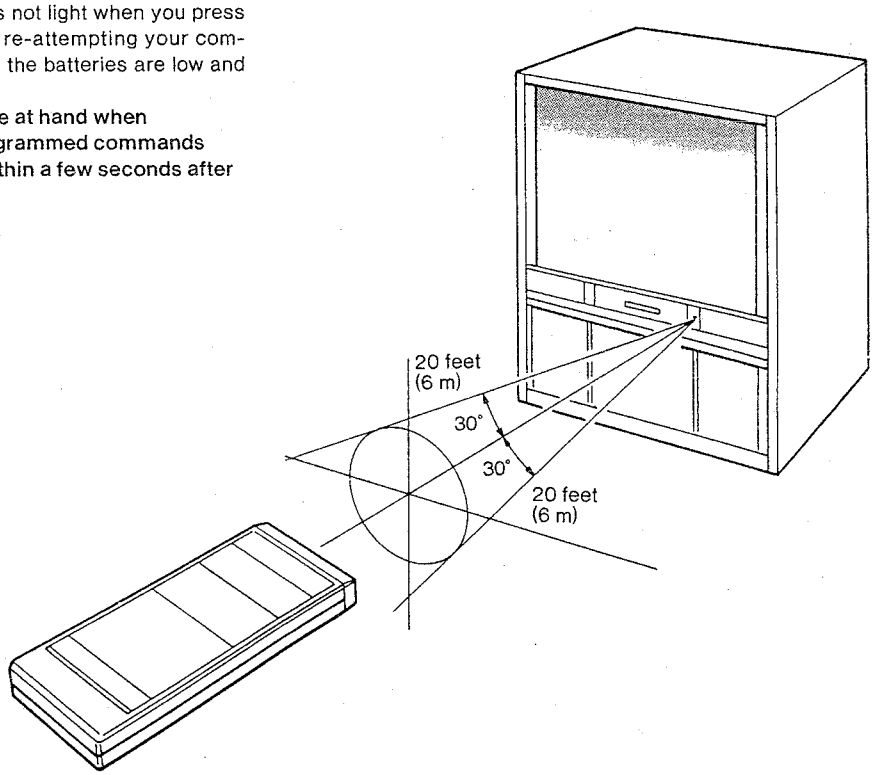
NOTE:
These figures are general and do not necessarily apply to programmed commands.

Battery Replacement

If the TRANSMIT/LEARN indicator does not light when you press a key, try pressing RESET button and re-attempting your command. If the indicator still doesn't light, the batteries are low and should be replaced as soon as possible.
Be sure to have the new batteries close at hand when replacing worn out ones, because programmed commands might be lost from the unit memory within a few seconds after the batteries are removed.

NOTE:

- *As the unit power switch is connected to the battery compartment cover, the unit will not operate without the cover even if the batteries are loaded, and memory will only be retained for approximately 30 minutes (if the batteries are loaded).*
- *Never close the cover when the batteries are not loaded. The programmed commands will be lost within a few seconds if you do so.*



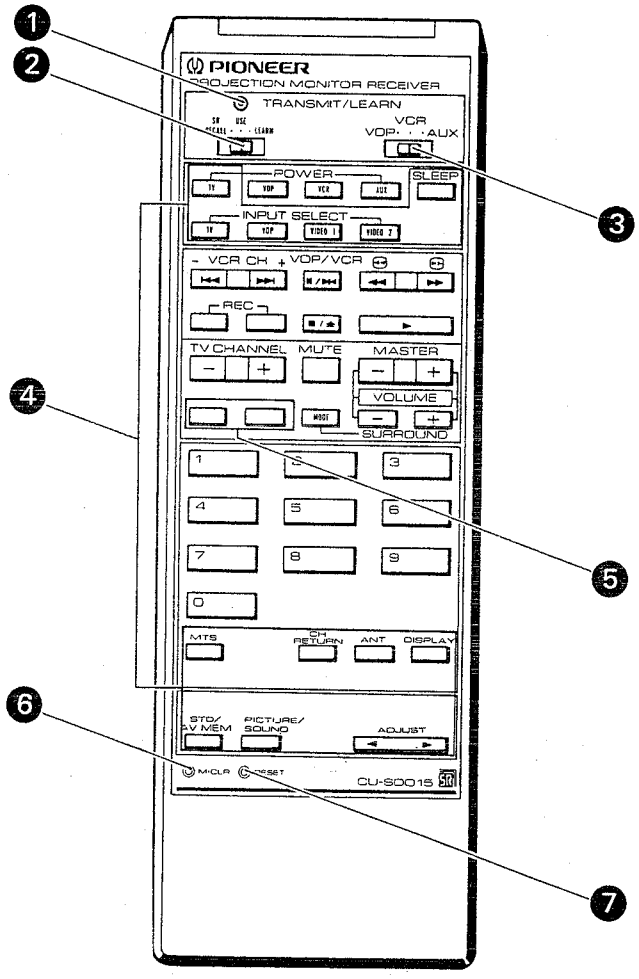
BASIC OPERATIONS

Besides controlling your projection monitor, the Pioneer Programmable Remote Control Unit can also control any audio or video appliance that has an infrared remote control unit, when you follow the simple procedure of programming its remote control commands into it. Moreover, any LD Player, VCR, or audio component bearing the Pioneer SR mark can be operated with this unit with no additional programming.
Before you begin, please read the following basic operating instructions carefully and familiarize yourself with the functions of the CU-SD015.

❶ TRANSMIT/LEARN Indicator

Flashes when commands are being sent in the USE or SR RECALL modes of the LEARN MODE selector. In the LEARN mode, however, it:

- lights when ready to accept programming information, and
- flashes to signal that you have chosen an incorrect key to store a command you wish to program or when the memory is full.



❷ LEARN MODE Selector

Set here to command Pioneer equipment marked with the SR mark. (No memory function)

In this mode the remote is able to command other components with commands you input through the LEARN function as well as Pioneer SR equipment.

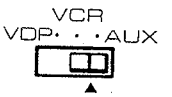
This setting activates the capability of the unit to "learn" and store command codes from other remote control units.

❸ TRANSMIT MODE Switch

Set to the position that corresponds to the component you wish to operate.

To control the LD Player

To send commands to the VCR



To transmit "learned" commands

❹ These keys are for use only in operation of the projection monitor, and cannot be used to store commands from other remote control units.

❺ Excess Storage Keys

These keys have no set function, and will hold one programmed command each when all the other eligible keys are occupied.

❻ M-CLR Button

Erases all commands programmed through the LEARN function; press lightly with the tip of a fine-point pen or other fine-tipped instrument to activate.

❼ RESET Button

If, during programming of a command you store it with a key other than that with which you wanted to store it, this button will clear just that mistake so you may correct it.

NOTE:
Very occasionally, an electrical discharge may occur inside the unit, causing some command malfunction. In the event of such an occurrence, pressing RESET should correct the problem. The possibility exists, however, that instead of correcting the problem, pressing RESET may erase the entire programmed memory.

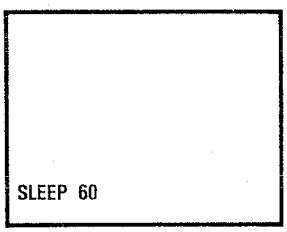
PROJECTION MONITOR OPERATION

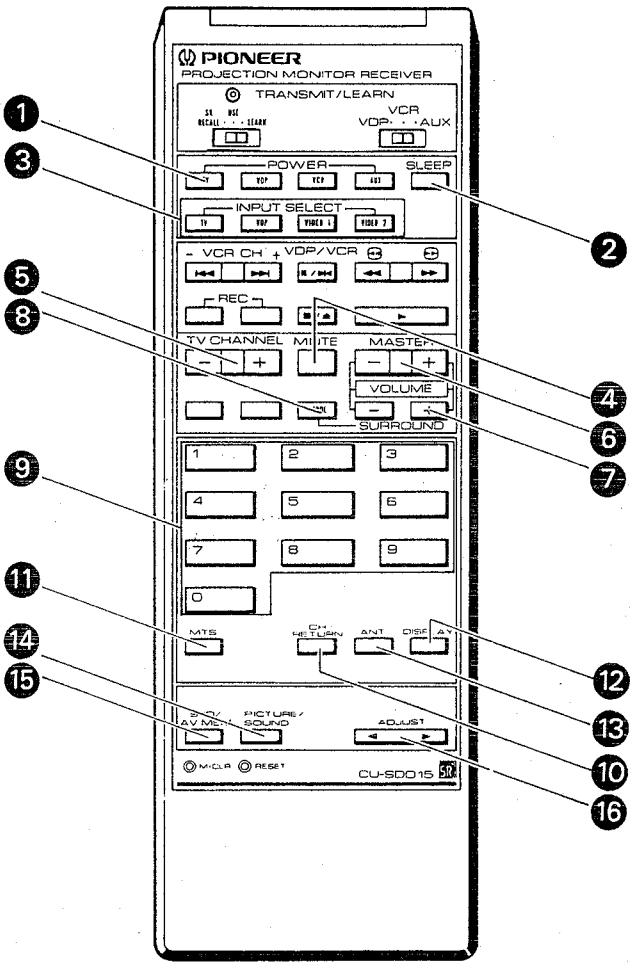
❶ TV POWER

Press once to turn on the projection monitor, press again to turn it off.

❷ SLEEP

Press to set the sleep timer.
The switching sequence (in minutes) is 90, 60, 30 and OFF (cancel). The screen will confirm your setting and the projection monitor will shut down when that amount of time has elapsed.

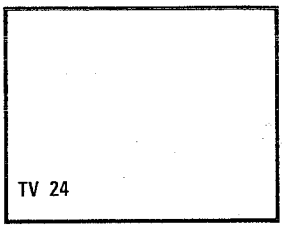




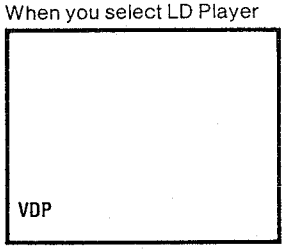
❸ INPUT SELECT

Press the key for the source you wish to watch. The screen will display your selection in the following manner:

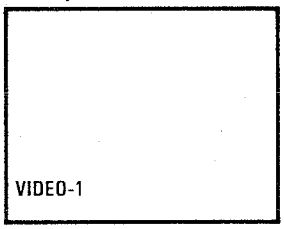
When you select TV



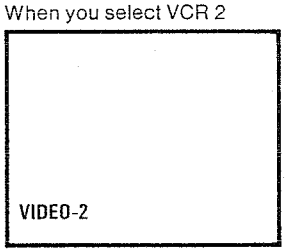
When you select LD Player



When you select VCR 1



When you select VCR 2

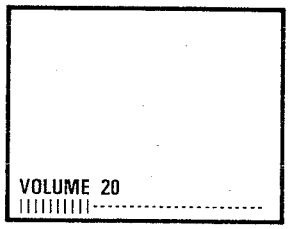


❹ MUTE

Press to temporarily turn off the sound, and again to return to the previous volume level. This comes in handy, for example, when you get a phone call.

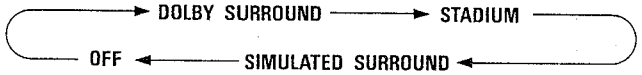
❺ TV CHANNEL
Press the right (+) or left (—) side of this key to scan up or down among the channels in channel memory.

❻ VOLUME
Press the right side (+) to increase the volume, the left side (—) to decrease it. The screen shows your setting as a number and a line of blocks.



❼ SURROUND VOLUME keys
Press the plus (+) key to increase volume in the surround mode, and the minus (—) key to decrease surround volume.
When surround mode is OFF, these keys do not work at all.

❽ SURROUND MODE key
Press to select the surround mode of sound reproduction. Your choices revolve in a loop sequence as follows:



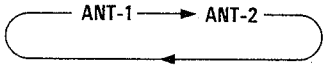
❾ Direct Channel Selection Pad
Press the key (or keys) that correspond to the channel that you wish to watch, to turn directly to that channel from any other channel.

❿ CH RETURN
Press to switch between the current channel and the previous channel you were watching immediately. This is useful, for example, if you wish to switch back and forth between two sporting events.

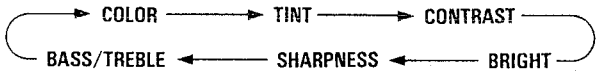
⓫ MTS (stereo)
Press to select the reception mode for multichannel TV sound (MTS).
The switching sequence is as follows:

⓬ DISPLAY
Press once to show the current channel and/or other information on the screen, and again to delete the display.

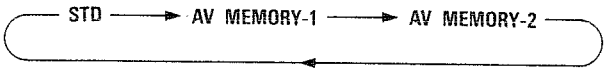
⓭ ANT
Press to switch between the sources you have connected to the ANTENNA-1 and ANTENNA-2 terminals. This is convenient, for instance, in switching between regular broadcast TV and cable TV.



⓮ PICTURE/SOUND
Press to select the picture or sound parameter to be adjusted.



⓯ STD/AV MEM (Memory)
Press to switch between the standard (STD) picture/sound settings and your AV MEMORY 1 and AV MEMORY 2 settings.
This switch only recalls settings stored in AV MEMORY; to put a current picture/sound setting into AV MEMORY, refer to the projection monitor instruction manual.

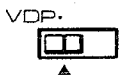


⓰ ADJUST
Press the right side of this key to increase the value of the item currently selected by the PICTURE/SOUND key, and the left side of the key to decrease it.

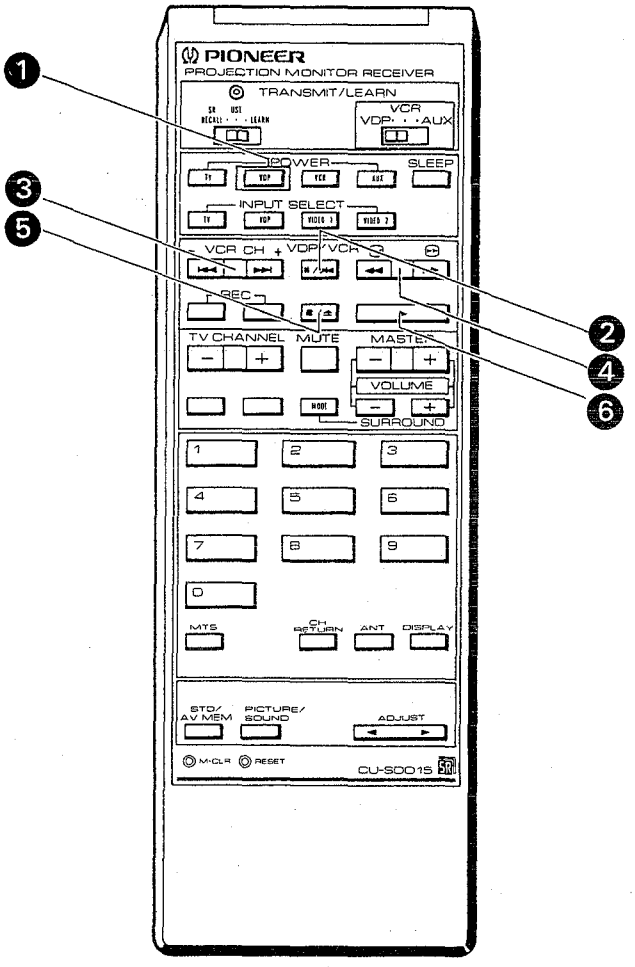
VDP OPERATION

If your VDP is a Pioneer LD Player bearing the marking SR, your programmable remote control unit has all the operation commands preset in its memory, so you don't have to program them.

To operate the LD Player, first set the TRANSMIT MODE selector to the VDP position.



Next, press VDP POWER and VDP INPUT SELECT.



❶ VDP POWER

❷ PAUSE

Press to interrupt disc play. Picture and sound vanish until you press this key again.

❸ CHAPTER SKIP

Press the right side of this key to move directly to the start of the next chapter; press the left side to move directly back to the start of the chapter currently in play. This works only with LD Players that have chapter skip capability.

❹ SCAN

Press to conduct high-speed visual scanning; pressing the left side of this key scans backward, and the right side scans forward.

❺ STOP/EJECT

Press once to stop playback, again to eject the disc.

❻ PLAY

Press to begin playback.

Note:
The input selector must be set at "VDP" to watch LaserVision discs.

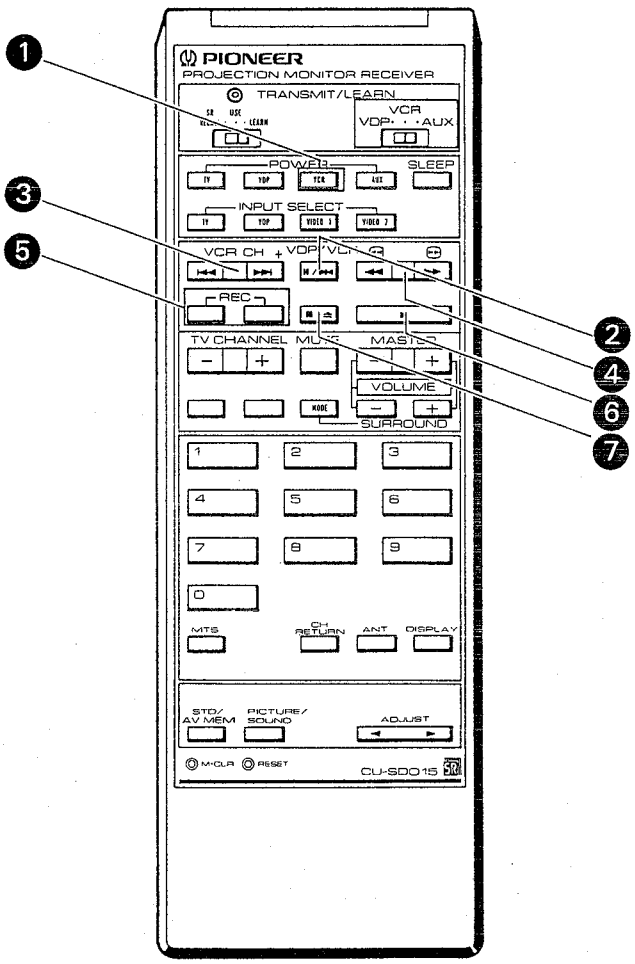
- *from the remote controller ..... Press the VDP key in the INPUT SELECT section.*
- *from the projection monitor ..... Press the INPUT selector until "VDP" appears in the corner of the screen.*

VCR OPERATION

If your VCR is a Pioneer model bearing the marking SR, your programmable remote control unit has all the operation commands preset in its memory, so you don't have to program them.

To operate the VCR, first set the TRANSMIT MODE selector to the VCR position.

Next, press VCR POWER and VCR INPUT SELECT.



❶ VCR POWER

❷ PAUSE/STILL
Press once to obtain a still picture during playback; keep depressing to advance frame by frame.

❸ CHANNEL
Press to select channels on the VCR.

❹ REW/FF
This key allows high-speed movement through parts of the tape that you don't wish to watch. Press the left side of the key to rewind the tape, and the right side to advance.

During playback you can use this key to search visually forward or backward in the same way as you would use it to rewind. Search continues until you release the key.

❺ REC
Press these two keys together to begin recording.

❻ PLAY
Press to begin playback.

❼ STOP
Press to stop the tape.

Note:
The input selector must be set at "VCR" to watch video-cassettes.

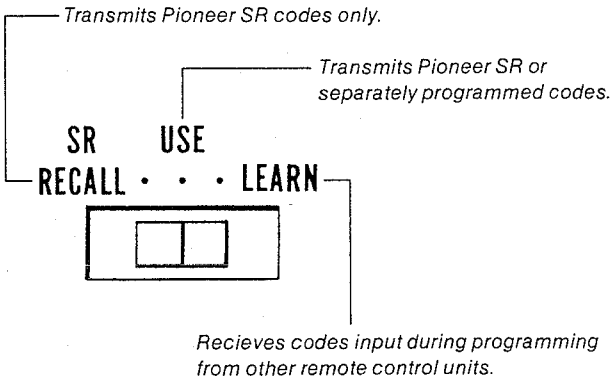
- *from the remote controller ..... Press the VCR key in the INPUT SELECT section.*
- *from the projection monitor ..... Press the INPUT selector until "VCR" appears in the corner of the screen.*

PROGRAMMING COMMANDS

Introduction

This remote control unit can "learn" the commands of other ones, regardless of their manufacturer, as long as the other unit is of the infrared type. In some cases you may still need the original remote control unit, but you will be able to use this unit for most of your video as well as audio system control needs.

NOTE:
It is advisable to program the unit in a separate room from the system with which it is to be used. This will prevent problems such as sudden high-volume output or accidental tape erasure that may occur if command signals reach your components during programming. Or, you may wish to unplug your component system and conduct programming in the same room. Simply turning off the power may not be sufficient since power on/off switching may also be remote controllable. Also do not throw away the original remote control units after programming. You might need the original ones in the future.


Transmits Pioneer SR codes only.
Transmits Pioneer SR or separately programmed codes.
SR USE
RECALL • • • LEARN
Recieves codes input during programming from other remote control units.

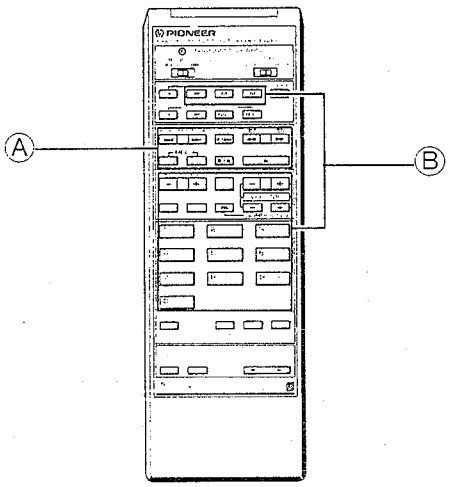
Which keys can be programmed with new commands?

Setting the LEARN MODE selector to the LEARN position allows the unit to memorize codes. Once programmed, these new commands can be transmitted only when the LEARN MODE switch is in the USE position. The SR RECALL setting will only allow transmission of the initialized Pioneer SR codes.

For VDP/VCR controls in the area indicated A, the keys can be programmed with commands from other remotes depending on the TRANSMIT MODE. In other words, each key can change its functions up to three different ways according to the setting of the TRANSMIT MODE.

For POWER and other TV controls in the area B, each key can be programmed with only a single command, regardless of the TRANSMIT MODE setting.

This remote control unit contains preprogrammed commands compatible with Pioneer equipment. If your home audio/video center consists exclusively of Pioneer components, you can use the unit without any additional programming. It is also possible to return to the original Pioneer commands after assigning other commands. (Refer to "Returning to the Initial Settings" for details.)



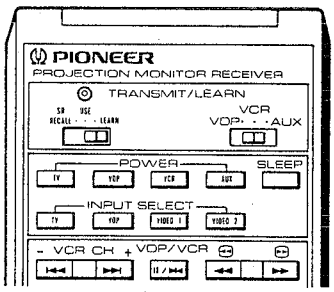
Other Important Notes

- A total of 47 keys may be used for memorization of other codes.
  (This may vary depending on the command format of the codes to be memorized.)
- There are 2 keys on the unit for recording, to help prevent misoperation. To start recording, or to memorize a command code with the REC keys, both of them must be pressed at the same time.
- When the batteries run down, all functions will stop automatically. If the indicators no longer light or flash, or components do not respond to signals from the unit, the batteries need to be replaced. (Always use alkaline cells.)
- When programming keys, make sure that both units are loaded with fresh batteries.
- Programming may be impossible from some types of infrared remote control units.

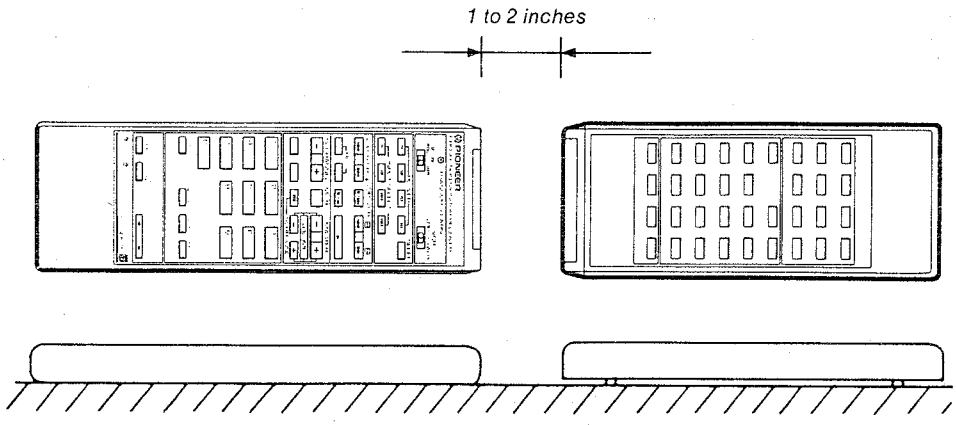
Example

Programming the playback command from the remote control unit of your VCR:

❶ **Set the LEARN MODE selector to LEARN position and the TRANSMIT MODE switch to VCR position.**
(Programming is possible in either transmission mode; video is used here as an example.)



❷ **Place the signal transmission areas of the two remote control units on a flat surface facing each other, approximately 2 to 5 cm (1 to 2 inches) apart.**



NOTE:
Memorization will not be possible if the units are too close to each other.

❸ **Press and hold the PLAY key of the programmable remote control unit until the TRANSMIT/LEARN indicator lights up.**

❹ **Press and hold the PLAY key of the VCR remote control unit.**

❺ **Release the VCR remote play key when the TRANSMIT/LEARN indicator goes out on the programmable unit.**

NOTE:
If the LEARN indicator flashes, it indicates either that you are trying to store a command with a key incapable of being used in the LEARN function or that programming capacity has been exceeded. In the latter case, the function programmed last will not be stored correctly. All previously programmed functions, however, will be retained in the memory and may be used as they are if the last function is not essential.
For re-programming information, refer to page 10, "Returning to the Initial Settings."

❻ **Repeat steps 3 to 5 until programming of the other commands is completed.**

❼ **Set the LEARN MODE selector of the programmable unit to the USE position.**
- Any previously programmed codes will be replaced by those you have just programmed.

❽ **Test the new codes to make sure they work.**
- If the VCR does not respond to commands you send, check the angle, positioning and distance between the two remote control units and repeat the programming procedure.

NOTE:
- *When programming, make sure that function indications (i.e. ▶, ▶▶, ■) are programmed from the original remote control unit into the matching keys of the programmable unit; this will greatly facilitate operation.*
- *Do not use excessive force in pressing the keys.*

Questions and Answers on Programming Commands

Q: The remote control unit for my VCR has two REC keys, which both have to be programmed at the same time to start recording. How should I program this into my programmable remote control unit?

A: Press and hold both REC keys on the programmable remote control until the TRANSMIT/LEARN indicator lights up, and then press the two keys on the VCR remote control simultaneously.

Q: The remote control unit of my VCR has a REC key and a PLAY key, and they both have to be pressed at the same time to start recording. How should I program this into my programmable remote control unit?

A: Press and hold both REC keys on the programmable remote control until the TRANSMIT/LEARN indicator lights up, and then press the REC and PLAY keys on the VCR remote control simultaneously.

NOTE:
If both keys are not pressed simultaneously in the above mentioned operations, the commands will not be memorized.

Battery Replacement

Replace the batteries as soon as possible if pressing the control keys does not cause the TRANSMIT/LEARN indicator to light even after the RESET button has been pressed. Learned commands will be lost from memory within a short time if batteries are removed. Therefore, have new batteries ready for replacement before removing old batteries.
Also, be sure to always use the specified batteries (LR6/AM3-alkaline batteries).

NOTE:
As the unit's power switch is connected to the battery compartment cover:

- *The unit will not operate when the cover is off even if batteries are loaded.*
- *If batteries are not loaded and the cover is replaced, the memory will be lost after a few seconds.*
- *With batteirs loaded and the cover off, memory is retained for about 30 minutes.*
- *Be very careful not to lose the battery compartment cover.*

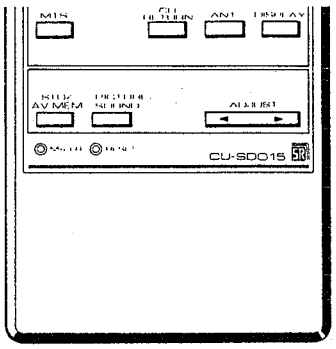
Returning to the Initial Settings

Proceed as follows to return all settings to the Pioneer Remote Control Code Settings.

1. Set the LEARN MODE selector to the LEARN position.
2. Press any programmable key. (The TRANSMIT/LEARN indicator will light.)
3. Using a ball-point pen or similar object, press and hold the M·CLR button down until the indicator flashes and then goes out.

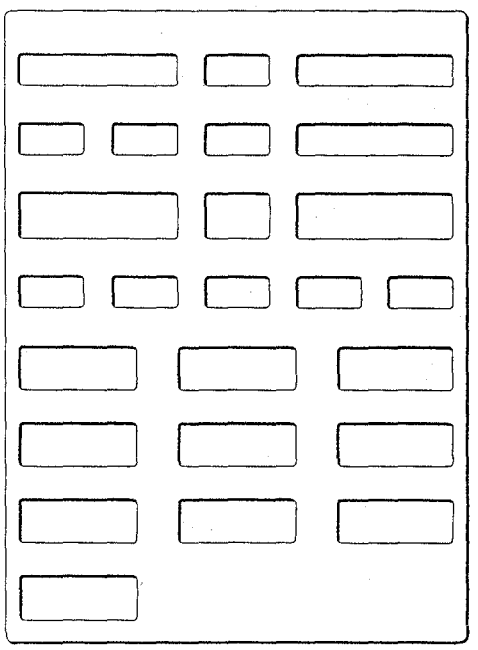
All commands you programmed will be erased, and the unit will be reset to use the codes set by Pioneer initially.

M-CLR button



Overlay

An overlay sheet is provided, on which you can write the functions of keys you have programmed from other remote control units and fit over the unit keyboard for your own personal reference.



SPECIFICATIONS

Operation System:	Programmable infrared remote control system
Power Source:	Two AM-3, "AA" IEC LR6 1.5 V alkaline dry cell batteries
Attachments:	Two batteries, operating instructions, a written guarantee and one overlay sheet
Dimensions:	73 (W) ×21 (H) ×218 (D) mm 2-7/8 (W) ×13/16 (H) ×8-19/32 (D) in.
Weight:	135 g (4.7 oz.) (excluding batteries)

THE SURROUND EFFECT

This unit has a built-in surround processor, adding presence and an expansive effect to the sound.

STADIUM:
Select this position when watching sports programs such as baseball game broadcasts, etc., for a stadium-like effect.

SIMULATED SURROUND:
Use this mode for monaural sources. You will obtain an expansive sound, with outstanding presence.

DOLBY SURROUND:
Choose this setting for movies (especially video tapes bearing the DOLBY SURROUND mark) and music playback. You will enjoy an effect similar to that of movie theaters or concert halls.

NOTE:
When using the surround effect, always set the rear panel SURROUND switch to the ON position.

Surround System Volume Balancing Procedure

1. Set the speaker selector on the front panel of the projection monitor to the INT position.
2. Play back the video source and adjust the projection monitor volume level as you like.
3. Set the speaker selector on the front panel of the projection monitor to the EXT position.
4. Set the surround switch on the rear panel of the projection monitor to the ON position.
5. Adjust the amplifier volume (front) to match that set at the rear of the projection monitor to achieve the surround effect.

Surround Speakers Installation Examples

For getting the most out of the surround system, place the speakers as shown below.

Example of a basic configuration.